GAMBLING IMPACT STUDY:

Part 1, Section B: Assessment of Potential Changes to Florida Gaming Industry and Resulting Economic Effects

and

Part 2 : Statistical Relationships between Gaming and Economic Variables for Communities

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Executive Summary

The Florida Legislature commissioned Spectrum Gaming Group to undertake a three-part study of legalized gambling, focusing on its economic effects and social costs. The first part, *Part 1, Section A: Assessment of the Florida gaming industry and its economic effects*, was delivered by Spectrum to the Legislature on July 1, 2013. This report combines the final two parts:

- Part 1B: An assessment of potential changes and economic effects (via extensive analysis of potential changes to the state's gaming industry, under a variety of scenarios as requested by the Legislature), and;
- Part 2: Statistical relationships between gaming and economic variables for communities.

While reading this report, it is important that readers understand the Legislature's instruction to not make recommendations in any of its reports. The Legislature commissioned Spectrum to undertake an economic and academic study for the purpose of educating the state's policymakers and other stakeholders so that they may make enlightened decisions regarding the future of gambling in Florida.

Combined Report Conclusion

This combined report examines the economic impact question from three separate analytical methodologies: gravity model, the REMI[1] model, and forecasts based on previous econometric results. Although the three methods have key distinctions in their assumptions and data, their findings are similar. Overall, Spectrum believes that the expansion of casino gambling, whether on a small scale or very large scale, would have, at best, a moderately positive impact on the state economy.

There would certainly be a net increase in state tax receipts, to the extent that additional gambling opportunities increase tourism and casino taxes are set above sales tax rates. There are likely to be only mild positive impacts on local and statewide employment and wages, however. This is because casinos would not represent a large expansion of their local economies (at least, in larger Florida counties, which we assume would be the most likely sites for any future casino expansion). Finally, the social costs of gambling should be kept in mind. However, the evidence suggests that social costs would not change dramatically, especially since gambling opportunities are already widespread across Florida.

[1] Regional Economic Models Inc., Spectrum's economic-modeling partner for this project.

Part 1B – Key Findings

Economic/Fiscal

Spectrum analyzed Florida's baseline gaming industry and 12 gaming-expansion scenarios[2] provided by the Legislature:

- **Baseline**: The Florida casino landscape reflects current law/current administration and that the banked card provision of the Compact will not be renewed.
- **Scenario A**: Renewal of the Seminole Tribe's exclusive authorization to conduct banked card games on Indian lands, as defined in the Indian Gaming Regulatory Act.
- **Scenario B**: Granting the Seminole Tribe exclusive authorization to offer table games on Indian lands, as defined in the Indian Gaming Regulatory Act.
- **Scenario C**: Regulating, prohibiting, restricting and/or taxing simulated casino-style gambling at Internet sweepstakes cafes, arcade amusement centers or truck stops. This scenario was subsequently modified to discuss the economic implications of the prohibition of these types of casino-style gambling.
- **Scenario D**: Modifying or repealing live racing requirements for pari-mutuel facilities, including evaluation of impacts on purses and award for all forms of pari-mutuel activity.
- **Scenario E**: Changing tax rates for Class III games at pari-mutuel facilities.
- **Scenario F**: Adjusting restrictions on the number and operation of slot machines at pari-mutuel facilities in Miami-Dade and Broward counties.
- **Scenario G**: Authorizing pari-mutuel facilities in counties other than Miami-Dade and Broward to offer slot machines.
- **Scenario H**: Authorizing pari-mutuel facilities to conduct table games or other Class III games.
- **Scenario I**: Authorizing a limited number (two) of casino/resort complexes in Miami-Dade and/or Broward counties.

[2] In all scenarios, it is important to note that (1) All revenue projections are expressed in current dollars unless specifically noted otherwise; (2) as applicable, revenue projections and resultant fiscal impacts are adjusted for future years based upon REMI's forecasted inflationary growth, as well as with respect to changes in adult population; and (3) all projections include slot operations at Hialeah Park, for which we assumed a September 1, 2013 opening date (although it actually opened August 14, 2013), and at Dania Jai-Alai, for which we assume an opening date of July 1, 2014.

- **Scenario J**: Authorizing a limited number (six) of casino/resort complexes throughout the state.
- **Scenario K**: Authorizing a limited number (two) of casino/resort complexes in Miami-Dade and/or Broward counties and authorizing pari-mutuel facilities in Miami-Dade and Broward counties to conduct table games or other Class III games.
- **Scenario L**: Authorizing a limited number (six) of casino/resort complexes around the State and authorizing all pari-mutuel facilities statewide to offer both slots and table games (or other Class III games).

Additionally, within some of the 12 aforementioned scenarios, we prepared sub-scenarios to show impacts of the following:

- Minimizing cannibalization of GGR to existing casinos.
- Maximizing statewide GGR levels.
- Pari-mutuel facilities having the option to end live performances, with supplementation of horse purses and awards calculated as percentage of statewide GGR, rather than by facility.

Our economic/fiscal analyses omit two of the listed scenarios: C, because gambling in non-casinos is prohibited; and D, because modifying or repealing live-racing requirements does not impact the analysis of gaming facilities.

Spectrum principally relied on gravity modeling to develop gross gaming revenue ("GGR") projections and related metrics under each gaming-related scenario. The following table summarizes our projections by scenario for those that relate to legalized gaming:

$M, current $ / Scenario:	Baseline	A / E	B	G-1	G-2	H-1 / H-2	H-3	H-4
# Pari-mutuel Casinos	8	8	8	26	26	8	26	26
# Native American Casinos	8	8	8	8	8	8	8	8
# Destination Resorts	0	0	0	0	0	0	0	0
Grand Total # Casinos	16	16	16	34	34	16	34	34
# FL Counties w/ Casino	6	6	6	21	21	6	21	21
# Slots	22,973	22,973	22,973	41,273	48,673	22,973	40,973	48,173
# Table Games	0	344	418	344	344	681	1,221	1,437
# Positions	22,973	25,037	25,481	43,337	50,737	27,059	48,299	56,795
GGR / Position / Day (Actual$)	*$293*	*$292*	*$293*	*$264*	*$224*	*$284*	*$253*	*$215*
Slot Win	$2,455.7	$2,301.2	$2,297.5	$3,853.6	$3,884.8	$2,277.0	$3,701.8	$3,723.6
Table Win	$0.0	$368.8	$427.6	$325.2	$259.3	$531.1	$763.8	$742.0
GGR	$2,455.7	$2,670.0	$2,725.1	$4,178.7	$4,144.1	$2,808.0	$4,465.5	$4,465.5
" " In-State	*$2,287.0*	*$2,490.5*	*$2,542.9*	*$3,878.1*	*$3,845.2*	*$2,621.6*	*$4,144.3*	*$4,144.3*
" " Out-of-State	*$168.8*	*$179.5*	*$182.2*	*$300.6*	*$298.9*	*$186.4*	*$321.3*	*$321.3*
Net GGR Rev. (Taxable)	$583.6	$547.0	$547.0	$2,110.8	$2,389.4	$668.4	$2,476.9	$2,787.7
Tax $ (at 35%)	$204.3	$191.4	$191.4	$738.8	$836.3	$233.9	$866.9	$975.7
Tax $ (at 27%) US Median	$157.6	$147.7	$147.7	$569.9	$645.1	$180.5	$668.8	$752.7
Tax $ (at 54%/12%) PA Model	$315.1	$295.4	$295.4	$1,139.8	$1,290.3	$314.5	$1,164.5	$1,310.5

$M, current $ / Scenario:	Baseline	I	J	K	L-1	L-2
# Pari-mutuel Casinos	8	8	8	8	19	19
# Native American Casinos	8	8	8	8	8	8
# Destination Resorts	0	2	6	2	6	6
Grand Total # Casinos	16	18	22	18	33	33
# FL Counties w/ Casino	6	6	9	6	19	19
# Slots	22,973	30,573	45,773	30,573	53,473	54,873
# Table Games	0	831	1,631	1,081	2,112	2,154
# Positions	22,973	35,559	55,559	37,059	66,145	67,797
GGR / Position / Day (Actual$)	$293	$246	$236	$239	$224	$218
Slot Win	$2,455.7	$2,580.6	$3,764.0	$2,562.3	$4,247.4	$4,253.9
Table Win	$0.0	$614.4	$1,018.8	$677.0	$1,150.2	$1,143.7
GGR	$2,455.7	$3,195.0	$4,782.8	$3,239.3	$5,397.6	$5,397.6
" " In-State	$2,287.0	$2,965.1	$3,847.4	$2,838.3	$4,387.3	$4,387.3
" " Out-of-State	$168.8	$229.9	$935.4	$401.0	$1,010.4	$1,010.4
Net GGR Rev. (Taxable)	$583.6	$1,326.3	$3,390.3	$1,394.5	$3,994.9	$4,028.7
Tax $ (at 35%)	$204.3	$464.2	$1,186.6	$488.1	$1,398.2	$1,410.0
Tax $ (at 27%) US Median	$157.6	$358.1	$915.4	$376.5	$1,078.6	$1,087.7
Tax $ (at 54%/12%) PA Model	$315.1	$609.8	$1,495.9	$618.4	$1,763.6	$1,781.2

Source: Spectrum Gaming Group. **Notes:** Scenarios H-1 and H-2 have pari-mutuel operators limited to Miami-Dade and Broward counties, whereas Scenarios H-3 and H-4 have pari-mutuel operators statewide. Scenarios G-1, H-3, and L-1 reflect results with location/sizing constraints imposed to minimize cannibalization of existing operators.

Working with project partner REMI, Spectrum then projected the economic impacts of the gaming scenarios noted above compared to the Baseline scenario (as applicable). Scenarios E and F had no estimated changes in employment or GGR relative to the Baseline scenario and thus no quantifiable change. These scenarios were run through REMI's Tax-PI model under four different budget conditions:

1. That labeled *Default Budget* was that provided by the State of Florida Office of Economic and Demographic Research.
2. That labeled *Florida pari-mutuel gaming tax* reflects all gambling taxed at Florida's prevailing pari-mutuel slots rates, i.e. 35 percent.
3. That labeled *US median gaming tax rate* reflects all gambling taxed at national median rates, i.e. 27 percent.
4. That labeled *Pennsylvania gaming tax rates* reflects all gambling in Florida taxed using the rates prevailing in Pennsylvania, i.e. 54 percent for slots and 12 percent for table games.

A summary of the employment, Gross State Product and tax revenue impacts at the baseline is as follows:

Baseline Average	At Default Budget	At Florida Pari-Mutuel Gaming Tax Rate	At US Median Gaming Tax Rate	At Pennsylvania Gaming Tax Rates
Employment	11,073	11,074	11,073	11,076
Gross State Product	$1,120	$1,120	$1,120	$1,120
Gaming Taxes	$0.22	$0.26	$0.21	$0.39
Sales/Use Tax	$26.51	$26.51	$26.51	$26.51
Lottery	$1.85	$1.85	$1.85	$1.85
Compact Revenues	$0.11	$0.11	$0.11	$0.11
All other Revenues	$46.30	$46.30	$46.30	$46.30

Source: Spectrum Gaming Group, Regional Economic Models Inc. Jobs in thousands, $ in nominal billions.

Next, we look at the economic/fiscal impacts by scenario using the Default Budget and at three different gaming-tax levels. The results are incremental to the Baseline Level.

The first table (following page) shows the economic/fiscal impacts of each scenario that does not involve a combination of expansion scenarios.

Average change by scenario, as compared to Baseline Level									
At Default Budget	**A**	**B**	**G-1**	**G-2**	**H-1**	**H-3**	**H-4**	**I**	**J**
Employment	1,697	1,982	6,650	9,209	3,253	10,351	13,941	2,737	13,002
Gross State Product	$172	$210	$972	$1,002	$264	$1,189	$1,256	$586	$2,333
Gaming Taxes	($0)	($0)	$30	$35	$2	$36	$42	($3)	($3)
Sales/Use Tax	$3	$3	$8	$11	$5	$13	$17	$17	$53
Lottery	($3)	($4)	($0)	($0)	($4)	($1)	($1)	$1	$3
Compact Revenues	$44	$53	($110)	($110)	$47	($110)	($110)	($47)	($110)
All other Revenues	$2	$2	$12	$14	$4	$16	$19	$15	$48
At Florida Pari-Mutuel Gaming Tax Rate	**A**	**B**	**G-1**	**G-2**	**H-1**	**H-3**	**H-4**	**I**	**J**
Employment	1,728	2,018	6,403	8,879	3,268	10,038	13,543	2,840	13,248
Gross State Product	$175	$212	$951	$974	$266	$1,163	$1,223	$595	$2,353
Gaming Taxes	$1	$2	$16	$17	$3	$19	$20	$3	$10
Sales/Use Tax	$3	$3	$8	$11	$5	$12	$16	$17	$53
Lottery	($3)	($4)	($0)	($0)	($4)	($1)	($1)	$1	$3
Compact Revenues	$44	$53	($110)	($110)	$47	($110)	($110)	($47)	($110)
All other Revenues	$2	$2	$11	$14	$4	$15	$19	$15	$48
At US Median Gaming Tax Rate	**A**	**B**	**G-1**	**G-2**	**H-1**	**H-3**	**H-4**	**I**	**J**
Employment	1,728	2,014	6,354	8,830	3,262	9,981	13,483	2,830	13,206
Gross State Product	$175	$212	$947	$970	$265	$1,159	$1,218	$594	$2,350
Gaming Taxes	$1	$1	$13	$14	$2	$16	$17	$2	$8
Sales/Use Tax	$3	$3	$8	$11	$5	$12	$16	$17	$53
Lottery	($3)	($4)	($0)	($0)	($4)	($1)	($1)	$1	$3
Compact Revenues	$44	$53	($110)	($110)	$47	($110)	($110)	($47)	($110)
All other Revenues	$2	$2	$11	$14	$4	$15	$19	$15	$48
At Pennsylvania Gaming Tax Rates	**A**	**B**	**G-1**	**G-2**	**H-1**	**H-3**	**H-4**	**I**	**J**
Employment	1,745	2,036	6,527	9,011	3,294	10,187	13,696	2,875	13,353
Gross State Product	$176	$215	$962	$986	$268	$1,176	$1,236	$598	$2,362
Gaming Taxes	$2	$2	$23	$24	$4	$27	$29	$5	$16
Sales/Use Tax	$3	$3	$8	$11	$5	$12	$17	$17	$54
Lottery	($3)	($4)	($0)	($0)	($4)	($1)	($1)	$1	$3
Compact Revenues	$44	$53	($110)	($110)	$47	($110)	($110)	($47)	($110)
All other Revenues	$2	$2	$12	$14	$4	$16	$19	$15	$48

Source: Spectrum Gaming Group, Regional Economic Models Inc. Jobs in units, $ in nominal millions (rounded).

The next table (following pages) shows the economic/fiscal impacts of each scenario that involves a combination of expansions scenarios.

Average change by combination scenario, as compared to Baseline Level							
At Default Budget	**A-1**	**B-1**	**H-2**	**I-1**	**K**	**L-1**	**L-2**
Employment	1,246	1,530	2,803	2,285	2,179	14,388	15,827
Gross State Product	$163	$201	$256	$578	$543	$2,497	$2,590
Gaming Taxes	($0.44)	($0.38)	$1.80	($2.90)	($3.64)	$8.50	$10.23
Sales/Use Tax	$1.90	$2.55	$4.36	$16.35	$47.63	$39.71	$58.36
Lottery	($3.35)	($4.14)	($4.01)	$1.34	$6.04	($8.60)	$0.47
Compact Revenues	$43.87	$53.35	$46.52	($46.91)	($91.41)	($109.72)	($109.72)
All other Revenues	$1.23	$1.92	$3.60	$14.34	$44.93	$34.85	$54.52
At Florida Pari-Mutuel Gaming Tax Rate	**A-1**	**B-1**	**H-2**	**I-1**	**K**	**L-1**	**L-2**
Employment	1,276	1,512	2,815	2,386	2,285	14,517	15,944
Gross State Product	$166	$200	$257	$586	$552	$2,507	$2,599
Gaming Taxes	$1.22	$1.56	$2.50	$2.82	$2.33	$15.75	$16.53
Sales/Use Tax	$1.95	$2.57	$4.38	$16.42	$47.74	$39.73	$58.38
Lottery	($3.35)	($4.24)	($4.01)	$1.35	$6.05	($8.60)	$0.47
Compact Revenues	$43.87	$55.08	$46.52	($46.91)	($91.41)	($109.72)	($109.72)
All other Revenues	$1.28	$1.98	$3.62	$14.39	$45.02	$34.86	$54.53
At US Median Gaming Tax Rate	**A-1**	**B-1**	**H-2**	**I-1**	**K**	**L-1**	**L-2**
Employment	1,276	1,560	2,809	2,378	2,276	14,458	15,883
Gross State Product	$165	$203	$256	$585	$551	$2,502	$2,594
Gaming Taxes	$0.93	$1.20	$1.98	$2.10	$1.70	$12.37	$13.02
Sales/Use Tax	$1.95	$2.59	$4.37	$16.42	$47.74	$39.68	$58.31
Lottery	($3.35)	($4.13)	($4.01)	$1.35	$6.05	($8.60)	$0.46
Compact Revenues	$43.87	$53.35	$46.52	($46.91)	($91.41)	($109.72)	($109.72)
All other Revenues	$1.28	$1.96	$3.62	$14.40	$45.02	$34.83	$54.49
At Pennsylvania Gaming Tax Rates	**A-1**	**B-1**	**H-2**	**I-1**	**K**	**L-1**	**L-2**
Employment	1,292	1,586	2,841	2,423	2,312	14,662	16,097
Gross State Product	$167	$206	$259	$590	$555	$2,519	$2,612
Gaming Taxes	$1.92	$2.45	$3.75	$4.52	$3.83	$23.77	$24.87
Sales/Use Tax	$1.98	$2.64	$4.43	$16.46	$47.75	$39.88	$58.53
Lottery	($3.35)	($4.13)	($4.00)	$1.35	$6.06	($8.58)	$0.49
Compact Revenues	$43.87	$53.35	$46.52	($46.91)	($91.41)	($109.72)	($109.72)
All other Revenues	$1.30	$2.01	$3.67	$14.42	$45.03	$34.97	($23.85)

Source: Spectrum Gaming Group, Regional Economic Models Inc. Jobs in units, $ in nominal millions.

Based on our analysis of the scenarios, Spectrum concluded:

- Under the most robust expansion scenario analyzed (Scenario L), overall GGR at Florida's casinos could more than double to $5.4 billion in GGR annually (in current dollars). Under this scenario there would be 33 economically viable casinos statewide spread over 19 counties (compared to the Baseline scenario with 16 casinos in 6 counties) – while the number of gaming positions would nearly triple from the Baseline scenario (and approach 68,000 gaming positions statewide). The economic and fiscal impacts (excluding the social costs, which are broken out

below) resulting from this scenario (L-2) would be as follows: Average annual gains under current law/current administration at 16,097 jobs, $2.6 billion in gross state product, and -$22 million in state revenues due to the loss of compact revenues.

- Under the least robust expansion scenario analyzed (scenarios A and B), overall GGR at Florida's casinos could increase by 8.7 percent to 11 percent, to $2.7 billion in GGR annually (in current dollars). Under this scenario, there would still be 16 casinos in six counties (as this scenario contemplates continuation of table games exclusivity for the Seminole Tribe or authorization of additional types of table games at such facilities). The economic and fiscal impacts (excluding the social costs, which are broken out below) resulting from these scenarios would be as follows: Scenario A averages gains of 1,697 jobs, $172 million in gross state product, and $41 million in state revenues; Scenario B averages gains of 1,821 jobs, $210 million in gross state product, and $51 million in state revenues. These results are under the current law/current administration assumption.

Spectrum and REMI also used information from a comprehensive consumer survey conducted by the University of Florida for this study to produce estimates of the economic impacts of changes in visitors. Section A (see Chapter III) describes the impact of current visitors extending their stay due to the presence of expanded gaming opportunities. Section B describes the impact of the increase in Florida-based gambling by residents who currently gamble out of state or at a Native American casino. Section C describes the impact of the increase in Florida-based gambling by residents who currently do not gamble but would if additional activities were available. Section D describes the impact of the increase in visitors to Florida rather than an alternative destination due to the availability of gaming. Section E describes the impact of the decrease in visitors to Florida due to the availability of gaming.

The following table summarizes the economic impacts for each section described above:

At Default Budget	A	B	C	D	E
Employment	40,734	12,337	293	125,989	-7,405
Gross State Product	$5,179	$1,380	$60	$10,616	($623)
Gaming Taxes	$17.87	$4.25	$0.45	$13.63	($0.80)
Sales/Use Tax	$70.24	$20.92	$0.43	$204.54	($12.01)
Lottery	$3.94	$1.11	($0.47)	$9.37	($0.55)
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00
All other Revenues	$81.82	$23.58	$0.43	$223.80	($13.14)

Source: Spectrum Gaming Group, Regional Economic Models Inc., University of Florida. Dollars in nominal millions.

Social

The body of scientific research focusing on the consequences of gambling expansion is relatively limited by both its size and methodological quality. Upon systematic examination, the research fails to demonstrate that gambling expansion has changed the prevalence of gambling-related problems. Nevertheless, before we can draw a confident conclusion about the

epidemiological consequences of gambling expansion, the implication of having a small body of methodologically weak research is the need to conduct high-quality prospective longitudinal studies to clarify the impact of expanded gambling upon the public health and welfare. Such a study would demonstrate the number of new cases of gambling disorder, the course of such problems, and the distribution of these problems based upon exposure to expansion.

With that in mind, we need to be mindful of two primary possibilities:

- Gambling expansion is related to the emergence and development of gambling-related problems as the conventional wisdom suggests.
- Gambling-exposed settings have adapted to the influence of gambling by developing sufficient immunity and resilience to gambling that gambling expansion has little impact on the public health and welfare.

In this report, we note that the identification of a specific social cost of gambling expansion is entirely dependent upon the operational definition of social cost. Unfortunately, to date, the economic experts in this area have not come to an agreement about a gold standard for defining social cost. In fact, the extent of expert disagreement in this area of research is quite profound. Disagreement among economic perspectives yields a broad range of social cost estimates. More specifically, for Florida, the range of economic estimates is, for the gross social costs based on past-year problem and disordered gambling, between $258 million and $823 million per year. For lifetime problem and disordered gambling, we estimate the social costs to be between $373 million and $1.19 billion per year, as seen in the following table:

Gross Annual Social Cost Estimates for Florida Past-Year Prevalence Estimates			
Definition	**Pathological Gamblers**	**Problem Gamblers**	**Total Estimated Cost**
Economics	$172,351,000	$ 86,156,000	$258,507,000
Economics + transfers	$390,717,000	$195,397,000	$586,114,000
Economics + transfers + internalized costs	$548,754,000	$274,309,000	$823,063,000
Gross Annual Social Cost Estimates for Florida Lifetime Prevalence Estimates			
Economics	$287,252,000	$ 86,156,000	$ 373,408,000
Economics + transfers	$651,195,000	$195,397,000	$ 846,592,000
Economics + transfers + internalized costs	$914,494,000	$274,309,000	$1,188,803,000

Source: Spectrum Gaming Group summary. All amounts are rounded to the nearest $1,000.

Florida is already exposed to a considerable array of gambling opportunities and access. The scientific literature suggests that gambling expansion will not automatically translate into an enduring set of expanded gambling problems for mature gambling jurisdictions. This is especially true for areas that already have a meaningful amount of gambling opportunities available to its residents – such as Florida. This means that the expansion scenarios Florida is considering, from minimal to maximal, probably will not have as diverse or as robust an impact as they could within a less-gambling-exposed jurisdiction.

REMI used the estimate of social costs to run a simulation that focuses on capturing their economic impacts on the State of Florida. These costs were modeled by reducing the amenity value

of Florida. This methodology is used to capture non-pecuniary aspects that can generally be described as quality of life and results in fewer in-migrants to the state.

At Default Budget	Average
Employment	-665
Gross State Product	($67)
Gaming Taxes	($0.00)
Sales/Use Tax	($3.58)
Lottery	$0.66
Compact Revenues	$0.00
All other Revenues	($7.30)

Source: Spectrum Gaming Group summary, Regional Economic Models Inc. Dollars in nominal millions.

Part 2 – Key Findings

Part 2 of the three-part study commissioned by the Florida Legislature focused on how the introduction or expansion of gaming impacts the host or nearby communities.

This report analyzes county-level data on employment, average weekly wages, and the number of establishments in operation, and offers projected impacts of casino expansion in selected Florida counties. The analysis utilizes previously published estimated casino impacts on employment and wages, and estimated casino impacts on the number of establishments based on peer counties outside of Florida. Key points are as follows:

- The literature on the economic impacts of legalized casinos is mostly recent, with many studies published since the early 1990s. Many researchers and casino opponents have argued that casinos may "cannibalize" other industries, resulting in no net positive (or a negative) impact on employment and wages.
- Specific projections of the economic impacts of casinos have been mixed.
- The study by Cotti (2008) is the most comprehensive county-level study on the economic impacts of casinos. His estimated impacts on employment and wages are utilized in projecting impacts from prospective casinos in selected counties in this report.
- We collected data from the Bureau of Labor Statistics (Quarterly Census of Employment and Wages) on number of people employed, average weekly wages, and the number of establishments, at the county level, from 2002Q1 through 2012Q4.
- We analyze the potential impacts of introducing casinos in Broward, Hillsborough, Miami-Dade, and Orange counties, and project the number of jobs that would be created, on net, with the introduction of casinos, compared to if no casinos were introduced. The results suggest that, countywide, there is unlikely to be significant changes in overall employment and average wages with the introduction of casinos. However, there will be increases in employment and wages in the leisure and

hospitality and "other services" sectors. The most likely reason the analysis concludes that the employment and wage impacts are insignificant is that research has shown that casino impacts are less noticeable in larger-population counties.

- Another finding is that the number of establishments in all industries (at the county level) is projected to increase with the introduction of casinos.
- Specific projections, in terms of number of jobs created, changes in average weekly wages, and changes in the number of establishments, are provided for three sectors: All Industries, Leisure & Hospitality, and Other Services. Estimated casino effects are:
    - All Industries: No. of establishments (+2.32 percent), No. employed (+0.28 percent), and Avg. Weekly Wages (-0.12 percent)
    - Leisure & Hospitality: No. of establishments (+2.85 percent), No. employed (+3.61 percent), and Avg. Weekly Wages (+2.28 percent)
    - Other Services: No. of establishments (+4.39 percent), No. employed (+2.03 percent), and Avg. Weekly Wages (+3.36 percent)
- When we consider the employment and wage impacts of prospective pari-mutuel counties that add slot machines, our projections suggest that the effects are likely to be similar to a standalone casino (in percentage terms). Since most counties that currently host pari-mutuels have very large populations, the estimated employment and wage impacts (on All Industries) are minor.
- Taken together, along with state-level estimates provided by REMI, the results suggest that casinos would likely have a mildly positive economic impact on their local economies and the state economy. We find no evidence to support the contention that casinos dramatically "cannibalize" other industries. The fact that casinos will compete with other firms, and that there is no net effect on county-level employment, suggests that, on balance, casinos have a neutral impact on local labor markets.
- The report notes caveats that should be considered when interpreting the results.

Introduction

Spectrum Gaming Group ("Spectrum," "we" or "our") studies of the social and economic impacts of gaming harken back to the early 1980s, long before this industry developed a national footprint, and long before it became a significant presence – and a major point of debate – in Florida. Our work since that time has centered on certain core principles that remain universal:

- Winners and losers will be created by the introduction of casinos into a community, as well as by any expansion or changes in the rules. The public and private sectors must maintain realistic expectations, and guide public policy where it can be guided.
- Gaming should never be viewed as a panacea to cure social ills or solve fiscal problems. It is a tool that must be managed through comprehensive legislation and effective regulation.
- The work of policymakers does not end with the development of legislation, or with an agreement on compacts. In a very real sense, the work of the public sector at that point is just beginning.
- Neither the challenges nor the opportunities created by a casino industry stop at municipal or even state boundaries.
- Decisions to expand or introduce any form of gaming will have ramifications that will last for generations, and such decisions are largely irreversible. The very moment that a new facility opens, it creates powerful political forces and new stakeholders who have an interest in the new status quo. That is one reason why gaming often expands, and rarely contracts.

Change is inevitable when legal gambling is introduced or expanded in a state. Some changes are dramatic, such as the construction of a billion-dollar casino resort; some may be profound but not obvious, such as changes in discretionary spending patterns; while others may go undetected, such as embezzlement to feed an addiction.

In this combined report – the second and third of three commissioned by the Florida Legislature – Spectrum assesses potential changes in the state's gaming industry and their economic effects. The economic effects include examining the social costs of gambling, which – as the reader will see in Chapter IV herein – are difficult to estimate and impossible to pinpoint. The social costs, however, are a vital – and often overlooked – consideration for any jurisdiction considering the legalization or expansion of gambling of any kind.

The core of this report is comprised of the baseline scenario and 12 gaming-expansion scenarios, laid out by the Legislature, almost all of which concern potential change to the casino industry.

Additionally, as subsequently proposed by Spectrum and agreed to by the Legislature, we teamed with the University of Florida to conduct a comprehensive consumer survey of both

residents and non-residents regarding their views about gambling and gambling expansion in Florida. This survey was instrumental in completing Chapter III of this report and, we believe, will provide Florida stakeholders with valuable insights for years to come. (See the Appendix V for the complete survey results.)

Florida's deliberations of gaming expansion come at a time when the overwhelming majority of states are considering, or have recently considered, gambling expansion of some type – be it new lottery games, Internet gambling, legalization of casinos, additional casinos, or the introduction of gambling devices in retail locations. Although Florida already has a variety of legal gambling – notably pari-mutuel racing, slot machines at pari-mutuels, Indian casinos and a state lottery – the state is considered by existing and prospective casino operators to be an attractive and underserved market, owing to its large population, attractive demographics and strong tourism industry.

Whether any of the expansion scenarios analyzed herein come to pass remains to be seen, but it is important to understand the impacts of such change. These reports endeavor to help Florida's legislators gain that understanding. However, we caution that the scenarios as outlined offer only the beginning of such an understanding. They must be considered in a broad context, along with a serious consideration of the social, cultural and human aspects regarding any consideration of gaming policy.

A. Methodology

The State of Florida on April 16, 2013, retained Spectrum Gaming Group ("Spectrum," "we" or "our") to complete a two-part study of the state's gambling industry, pursuant to Invitation to Negotiate #859 ("the ITN").[3] This report includes both ...

- Part 1, Section B: *Assessment of Potential Changes to Florida Gaming Industry and Resulting Economic Effects*, and
- Part 2: *Statistical Relationships Between Gaming and Economic Variables for Communities.*

The first report – Part 1, Section A: *Assessment of the Florida Gaming Industry and its Economic Effects* – was delivered on July 1, 2013.

Following is the assigned scope of Part 1, Section B, as published in the ITN:

A. Assessment of potential changes and economic effects.
   1. The analysis shall provide an assessment of possible changes in the gaming industry. Scenarios to be evaluated include:
      a. Renewal of the Seminole Tribe's exclusive authorization to conduct banked card games on Indian lands, as defined in the Indian Gaming Regulatory Act.

[3] See http://www.leg.state.fl.us/GamingStudy/docs/ITN_859_Invitation.pdf.

b. Granting the Seminole Tribe exclusive authorization to offer table games on Indian lands, as defined in the Indian Gaming Regulatory Act.
c. Regulating, prohibiting, restricting and/or taxing simulated casino-style gambling at Internet sweepstakes cafes, arcade amusement centers or truck stops.
d. Modifying or repealing live racing requirements for pari-mutuel facilities, including evaluation of impacts on purses and awards: Thoroughbred racing, harness racing, quarter horse racing, greyhound racing, jai alai.
e. Changing tax rates for Class III games at pari-mutuel facilities.
f. Adjusting restrictions on the number and operation of slot machines at pari-mutuel facilities in Miami-Dade and Broward counties.
g. Authorizing pari-mutuel facilities in counties other than Miami-Dade and Broward to offer slot machines.
h. Authorizing pari-mutuel facilities to conduct table games or other Class III games.
i. Authorizing a limited number of casino/resort complexes in Miami-Dade and/or Broward counties.
j. Authorizing a limited number of casino/resort complexes around the State.

2. For each scenario, other than exclusive authorization for the Seminole Tribe to offer Class III games on Indian lands, as defined in the Indian Gaming Regulatory Act:
    a. The fiscal analyses shall address suitable numbers and locations of gaming facilities so as to maximize net new economic activity and avoid cannibalization of existing sectors.
    b. The fiscal analyses should evaluate each of three alternative tax regimes:
        i. One in which all non-lottery gaming activities are taxed at rates corresponding to current pari-mutuel tax rates;
        ii. One in which all non-lottery gaming activities are taxed at national average rates for their respective subsectors; and
        iii. One in which all non-lottery gaming activities are taxed at a rate that would maximize state revenues.
    c. The fiscal analyses should evaluate economies of leveraging equity and profits as sources for public funding of education, transportation, underwriting risks associated with a catastrophic hurricane event in Florida, and other public funding needs.
3. So the Legislature might best understand not only the fiscal impact estimates but also sources of variation, for each scenario, the analysis shall describe:
    a. Inputs to the study's fiscal impact models;
    b. Calculations the model uses to estimate fiscal impacts;
    c. Calculations the model uses to account for cannibalization against other sectors of the economy, including other potential expansions of gaming.
4. For each scenario, the analysis should include estimates of total spending and net (recognizing reduced spending at other Florida businesses because visitor and resident spending has now flowed to gaming activities) economic impact for gaming as well as the change in demand associated with each of several sources including:
    a. The current visitors who would have come to Florida in the absence of expanded gaming activities but would choose to spend more during their visit, or extend the length of their visit, if additional casino gaming were available;
    b. Floridians who now gamble out of state or in Native American casinos who would instead opt to gamble in Florida, if additional local gaming activities were available;
    c. Floridians who now do not gamble but would participate if additional gaming activities were easily available;

d. Visitors who plan a visit to Florida rather than an alternative destination due to the availability of gaming here;
e. Visitors who would choose not to visit Florida due to the presence of gaming activities.

5. For each scenario, the analysis shall provide an assessment of the likely social costs of expanded gaming activities, including problem and pathological gaming-related behaviors and changes in crime rates. The assessment shall compare and contrast credible existing studies of social costs of gaming and provide social cost scenarios to match the preceding economic and fiscal analyses.
6. For each scenario, the analysis shall evaluate whether and how estimates would change if implemented in combination with other scenarios.

Following is the assigned scope of Part 2, as published in the ITN:

1. The report shall include a statistical analysis of relationships among economic outcomes with the unit of observation being counties nationwide where new gaming facilities have opened and operated.
    a. The estimated parameters shall include standard measures such as employment, wages, and tax revenue and other measures, and their association with the presence and economic scale of gaming.
    b. The analysis will be county-specific in nature, using data for the 3000+ counties in the U.S., and it will control for their economic and demographic characteristics when performing statistical estimation of the effects of opening and operating gaming facilities.
    c. A panel dataset shall be constructed that incorporates different opening dates of gaming facilities and can be used to estimate impacts of gaming activity on performance of the economy.
    d. The output from this statistical modeling process will be the basis for presenting likely incremental economic impact to the State of the opening and operation of gaming facilities in the scenario described above.
2. A second statistical analysis shall be undertaken if data allow. This second analysis will be geospatial in nature, and will examine changes in local business structure associated with the opening and operation of gaming facilities.
    a. Geospatial data such as the NETS database or similar datasets that incorporate business location will be used to assess the composition of businesses that operate in geographical proximity to gaming facilities.
    b. The study will assess how that composition differs from the overall business composition of a county and its peer counties and how that structure changes upon introduction and operation of gaming facilities.
    c. The geospatial analysis will use various North American Industry Classification (NAICS) codes and suitable levels of aggregation to assess differences in business structure among geographically proximate businesses before and after opening and operation of gaming facilities.
    d. Variables to be presented in the analysis shall include employment and wage change in the vicinity of the casino and in the host county.

By agreement with Legislative staff, Part II, sec. 2 above was not performed.

Our task was to study the impacts of legalized gambling. Like many other states, Florida had (and probably still has) illegal and/or unregulated gaming in the form of Internet cafes and

slot-like arcade games. We discuss the consequences of the assumed shutdown of illegal gambling but do not otherwise factor illegal gambling in our other economic impacts.

Spectrum employed 17 project professionals for this combined report, all of whom are staff experts or associates, assisted by support staff as needed. Our team included: Dr. Howard Shaffer, Director, and Dr. Debi LaPlante, Director of Research and Academic Affairs, from the Division on Addictions at The Cambridge Health Alliance, a Harvard Medical School teaching affiliate; and Dr. Douglas Walker, Professor of Economics at the College of Charleston and author of *Casinonomics: The Socioeconomic Impacts of the Casino Industry* and numerous other gambling industry-related publications. The Spectrum team relied on publicly available data, as well as data requested from gambling operators and government sources, interviews with various Florida stakeholders (in person, by telephone and by email), existing documents and research reports, and our collective expertise in having studied gambling for more than three decades.

As we did with the Part 1, Section A, report, we teamed with Regional Economic Models Inc., a globally respected economic modeling firm based in Amherst, MA, that works with numerous state governments, including the State of Florida. REMI's goal in this report was to use the information developed by the other team members to estimate the economic impacts of the various gaming scenarios developed by the State. REMI relied on its expertise to prepare the data for input into its Tax-PI model.

PART 1

I. Assumptions, Methodologies and Considerations

Spectrum developed numerous assumptions, based on our experience and in consultation with Legislative staff, that are the foundation for the analyses throughout this report. It is critical that stakeholders understand these assumptions and the methodologies used in developing the results. We provide and discuss these below.

We further consider the impacts of certain situations that would be subject to a wide variety of assumptions or interpretations and as such we have not quantified/projected.

A. Current Casino Landscape

As of June 30, 2013, (the last day of the fiscal year ["FY 2013"]) we estimate there were 20,973 slot machines and 344 table games (and 23,037 gaming positions) at the 14 casinos throughout Florida.[4] Of the total gaming positions, 6,409 slot machines (27.8 percent of the state's gaming positions) were at the six existing pari-mutuels in Broward and Miami-Dade counties, while 16,628 gaming positions (72.2 percent of state total) were at the eight Native American casinos. Six of the 67 counties had at least one casino, while Broward and Miami-Dade counties had 67.1 percent of the state's gaming positions and Hillsborough County had 24.8 percent of the total.

In FY 2013, the six pari-mutuels with slots had $501.3 million of gross slot revenue, with net slot revenue of $435.8 million, resulting in revenue due to the State of $152.5 million (i.e., 35 percent of net slot revenue). We estimate the eight Native American casinos had $2.07 billion of combined slot and table games revenue during this period.[5] Therefore, we estimate GGR from Florida's 14 casinos was $2.57 billion.

Once both Hialeah Park and Dania Jai-Alai are operational with an assumed 1,000 slot machines apiece, we estimate there will be 22,973 slot machines and 344 table games (and 25,037 gaming positions) at 16 casinos statewide. Assuming existing casinos do not add or subtract gaming positions from their counts as of June 30, 2013, there would be 8,409 slot machines (33.6 percent of the state total) at eight pari-mutuels in Broward and Miami-Dade counties, while the balance of statewide gaming positions (66.4 percent) would be at the eight Native American

[4] These figures, as well as all other references to table games and/or gaming positions throughout this report, do not include poker tables and/or cardroom operations (unless specifically noted otherwise). One gaming position = one slot machine or one seat at a gaming table (we assume six seats per gaming table).

[5] Estimated average GGR per gaming position per day of $341, applicable to all gaming positions at all Native American casinos in Florida.

casinos. Collectively, Broward and Miami-Dade counties would have 69.7 percent of the total statewide gaming positions and Hillsborough County would have 22.9 percent of the total. There would be six counties in Florida with one or more casinos.

Importantly, this understanding and recognition of the current casino landscape provides the foundation for all of our modeling, and resultant GGR projections in this report.

B. Projecting GGR, Methodologies Employed

Demand for gaming in South Florida comes from multiple sources. Based on information and belief, the local population currently accounts for the vast majority of GGR (and visitation) to Florida's casinos.

The principal tool Spectrum uses in projecting GGR, under all scenarios, is our gravity model. The gravity model is an industry-standard forecasting technique that uses the actual adult population totals around a specified casino, taking into account competing locations from within a predefined catchment area (quantified by reasonable drive times, expressed in minutes, surrounding each casino – not actual driving or straight-line miles) to project visitation and, ultimately, GGR from the projected visitation. Simply, the farther away an adult resides from a casino (and/or respective casinos throughout Florida and/or in nearby states), the lower the probability that that person will make a trip to gamble there. If given an opportunity, adults with propensity to gamble will tend to choose to patronize the closest casino to their homes, particularly if the gaming product is similar amongst competing casinos. In addition to adult population totals surrounding the specified location, among other variables, the gravity model employed also considers casino participation rates, GGR per adult, and has the ability to adjust each location for the relative attractiveness of the gaming options/facilities when two or more viable gaming options/facilities are available to the population sets (i.e., adjust for number and/or offering of slots, table games, etc.).

Spectrum built a comprehensive, constrained gravity model. We incorporated estimated population data for 2013 covering 3,060 areas in Florida, Alabama, Georgia, Louisiana and Mississippi that were approximated by ZIP Code, including all areas within a four-hour drive of an existing or potential Florida casino. The data included population data (both total and estimated for gaming-age adults – age 21 and over) and median household income by ZIP Code (to adjust relative estimated GGR budgets accordingly).

Our estimated population and median household income data was obtained from Nielsen SiteReports and is principally based on US Census Bureau data. Nielsen SiteReports indicates this data is further refined at the ZIP Code level based on sources including trends in US Postal Service deliverable address counts, counts from the Nielsen Master Address File, and Valassis counts of new housing units.

Our gravity model accounts for all 15 existing casinos in Florida, in addition to provisions for up to 27 other potential casinos throughout the state (dependent on scenario). We further

assume these aforementioned 42 locations are the only valid locations for gaming facilities throughout Florida and in further determining "suitable numbers and locations of gaming facilities so as to maximize net new economic activity and avoid cannibalization of existing sectors" (per the Legislature's stated goal). Additionally, we include casinos (and/or markets with casinos) in nearby states where four-hour drive-time boundaries may overlap with such boundary emanating from the Florida border (i.e., to quantify shared visitation), such as New Orleans, Baton Rouge, the Mississippi Gulf Coast, Harrah's Cherokee in North Carolina, etc.

With regard to annual GGR per adult, the basis for the material assumptions is from extensive experience and working knowledge in many domestic gaming markets by Spectrum professionals assigned to this project, and supported by public data presented within this report (where applicable). The material assumptions (aside from adult population by ZIP Code and relative distance calculations, gravity effect) are:

- Gaming age of 21+ (i.e., the adult population).
- Drive-in adults, or local market gamers:
  - Four-hour drive boundary surrounding each destination resort.
  - Two-hour drive boundary surrounding the two Seminole Hard Rock casinos (Tampa and Hollywood).
  - One-hour drive boundary surrounding all other casinos in Florida
- Casino participation rates up to 40 percent of adult population by ZIP Code:
  - Adult population within a five-minute drive-time to any casino has an estimated casino participation rate of 40 percent.
  - Adult population beyond a five-minute drive-time to any casino has an estimated casino participation rate at or below 40 percent (while this rate decreases for the adult population, according to ZIP Code, as distance from a casino increases).
- Specific to destination resorts, as well as casinos with integrated hotels:
  - Annual hotel occupancy of 90 percent.
  - Annual GGR projections for hotel guests and tourists (the combined segments) is based on an assumed average GGR per occupied hotel room of $206.
    - This figure was determined based on fiscal year ended 2012 estimated GGR-per-occupied-room estimates from largest Las Vegas Strip resorts (the 23 locations having at least $72 million in GGR annually).
    - We deem this methodology as reasonable in quantifying expected levels of GGR that destination resorts could generate from non-local market visitation. For example, according to the most recent Las Vegas

Visitor Profile Study, for the years 2008-2012, the percentage of visitors to Las Vegas staying overnight was in excess of 99 percent. We believe the vast majority of GGR to these Las Vegas Strip properties was from out-of-state residents (i.e., hotel guests and tourists), while the Las Vegas Visitor Profile Study excludes residents of Clark County (where Las Vegas is located) from its results. For FY 2012, average GGR per occupied room night was $206.

- To quantify applicable non-gaming revenue and/or other related operating metrics applicable to Florida destination resorts, we will benchmark from the Nevada Gaming Abstract 2012. As an example:
  - Average room rate per day of $144
  - Average food and beverage sales per day of $133 per occupied room
  - Average other revenue of $89 per occupied room

To determine "suitable numbers and locations of gaming facilities so as to maximize net new economic activity and avoid cannibalization of existing sectors," we assume all existing casino operations in Florida will remain at current size (i.e., no change in number of gaming positions). However, we will determine the suitable numbers and locations of gaming facilities for any other locations of gaming facilities in Florida based on a benchmark performance figure of $200 in average win per gaming position per day and further assume that a location warranting less than 500 gaming positions (per our modeling/methodologies) will not be economically viable and, as such, will not materialize.

1. Casino Participation Rate

According to the American Gaming Association's 2013 *State of the States* survey, 34 percent of the US adult population visited a casino during 2012, while 32 percent of the US adult population gambled during a casino visit (i.e., of all US adults visiting a casino, ±5 percent did not gamble).

We estimate that the current casino participation rate for Florida adults patronizing a Florida casino is 23.1 percent. Furthermore, our modeling indicates the following casino participation rates (by distance from a casino):

- 38.2 percent for all Florida adults residing with a 30-minute drive of an existing Florida casino, and 15.5 percent for the remainder of Florida adults.
- 32 percent for all Florida adults residing with a one-hour drive of an existing Florida casino, and 11.8 percent for the remainder of Florida adults.
- 26.4 percent for all Florida adults residing with a two-hour drive of an existing Florida casino, and 8.6 percent for the remainder of Florida adults.

Furthermore, according to the *Harrah's Survey*, *Profile of the American Casino Gambler*,[6] of the top 20 largest feeder markets to US casinos, three were in Florida: Miami-Fort Lauderdale, Tampa-St. Petersburg-Sarasota, and Orlando-Daytona Beach-Melbourne. These three areas in Florida were aggregated according to Designated Market Areas ("DMA") and included 22 of Florida's 67 counties, and two-thirds of Florida's population. Based on the data compiled, the casino participation rate in Florida for these three DMAs, and aggregated, was 23.1 percent in 2005 – before the introduction of racetrack casinos in South Florida.

We believe that this rate has grown since the 2006 *Harrah's Survey* was conducted due to continuing expansion of casinos in Florida, as well as the proliferation of casinos nationwide. We believe the casino participation rate for adults that live nearby to a casino, or casinos, may reasonably approach 40 percent, annually. Therefore, in our modeling we assume a casino participation rate up to 40 percent by ZIP Code (albeit adjusted downward by gravity effect as the relative distance to a casino increases).

2. Annual GGR per Casino Gambler

Our estimate for annual GGR per casino gambler in our gravity model, and as applied to Florida (at current level, i.e., 2013), was based on operating results for FY 2013 for all Florida pari-mutuel slot operations and estimated operating results for Florida Native American casinos based on data received from the Seminole Tribe along with recent GGR estimates/projections (as contained in our earlier report).

Our modeling indicates an annual GGR per casino gambler of $866 among Florida adults. We believe this value is a reasonable estimate, as compared to the average derived US value in recent years. Per data assembled by Spectrum from various state and federal agencies, as well as the American Gaming Association, we have assembled nationwide casino GGR, as well as participants, over the most recent five-year period available:

Figure 1: US casino GGR, visitation and annual GGR per casino gambler (2008-12)

Year	GGR ($B) Commercial	GGR ($B) Native American	GGR ($B) Total	Casino Gamblers (millions)	Participation Rate	GGR / Gamer
2008	$36.2	$26.7	$62.9	54.6	25.0%	$1,152
2009	$34.3	$26.5	$60.8	61.7	28.0%	$985
2010	$34.6	$26.5	$61.1	54.8	25.0%	$1,115
2011	$35.6	$27.2	$62.8	59.7	27.1%	$1,053
2012	$37.3	$27.9	$65.2	71.6	32.0%	$911
5-Year Avg.	$35.6	$27.0	$62.6	60.5	27.6%	$1,035

Source: American Gaming Association, National Indian Gaming Commission, various state agencies

[6] The 2006 *Harrah's Survey* was the last report detailing these participation rates by market and, to our knowledge, is the most recently publicly available report addressing such.

As illustrated, over the last five years nationwide, commercial and Native American casino GGR averaged over $62 million annually, while there were an average of 60.5 million casino gamblers (casino participation) annually. This yields an average GGR per gamer of $1,035 over the five-year period.

Our derived GGR per Florida casino gambler of $866 is 84 percent of the national average result between 2008 and 2012. The difference may reflect GGR leakage to other jurisdictions that are beyond the boundaries utilized in our modeling (such as GGR from Floridians destined for the Mississippi Gulf Coast, Louisiana, Las Vegas, Atlantic City or elsewhere). Or the value may be suppressed due to the types and availability of casino offerings currently existing in Florida and/or in nearby states; that is, many casinos throughout Florida and in nearby states are not destination resorts and may have limited gaming and non-gaming offerings, thus relying extensively on lower-spending day-trip players.

The 2006 *Harrah's Survey* estimated the average number of visits annually to a casino was 6.1. Spectrum has no reason to believe that this figure would have declined since then, given the continued proliferation of casino gaming throughout the United States. Additionally, per a report that Spectrum prepared for the State of Connecticut in 2009, a comprehensive survey of 1,427 Connecticut residents found that the average number of casino visits per resident exceeded 12 annually at a time when every Connecticut adult resided within a two-hour drive of a casino and 40 percent resided within a one-hour drive.[7]

Therefore, we believe that our assumption of GGR per casino gambler (and by establishing reasonableness to number of casino visits that correspond to this value) is reasonable.

3. Accounting for Florida's Snowbird Population

With respect to Florida's snowbird population, it is our understanding that a significant amount of this population may be accounted for within US Census Bureau data (for Florida), and thus is captured within our modeling (and GGR projections) – as it is our understanding that US Census Bureau counts reflect a person's "usual residence" as of April 1, meaning the place where they live and sleep most of the time (although there are questions/efforts in place to add clarity to place of permanent residence).

In the context of our GGR projections, the following illustrative example shows an estimate of potential GGR from the snowbird population under the following assumptions:

- 1 million adult snowbirds in Florida annually
- One-half of Florida's adult snowbirds already accounted for in US Census data (as Florida residents)

[7] Spectrum Gaming Group, "Gambling in Connecticut: Analyzing the Social and Economic Impacts," June 22, 2009; http://www.spectrumgaming.com/dl/june_24_2009_spectrum_final_final_report_to_the_state_of_connecticut.pdf

- Average of six months spent in Florida
- Casino participation rate of 25 percent to 30 percent (a range consistent with US historical data)
- Average GGR per gamer of $1,035 annually (consistent with US historical data, while we apply one-half of this value to Florida casinos to mirror average time spent in Florida)

Under this methodology, the Florida snowbird population (and assumed non-residents of Florida) has annual GGR potential of $64.7 million to $77.6 million (for Florida casinos). Under all gaming expansion scenarios presented in this report, the GGR contribution from the Florida snowbird population is less than 2.9 percent of total GGR. However, under all gaming expansion scenarios presented, we assume a minimum of 5 percent of GGR is from non-residents of Florida (therefore, we believe we have sufficiently accounted for the Florida snowbird population within our projections).

4. Disclaimer

It should be noted that despite our drive-in (or local) market GGR projections resulting from our gravity modeling exercise, actual market and property performance can be subject to industry internal and external factors. From an internal industry perspective, competitive marketing and operational strategies, targeted and timely capital reinvestment, and customer perceptions all influence potential performance. From an external point of view, competition for patron discretionary income from other leisure and recreational activities and the general state of the economy may influence spending habits of gaming patrons. In essence, our GGR projections herein are illustrative and may be influenced by a variety of factors (aside from gravity modeling, or quantification of adults by drive-time calculations alone).

C. Minimizing Cannibalization of GGR to Existing Casinos

One of the State's goals in this exercise may be to maximize net new economic activity; our salient assumption is that this would be achieved through maximization of GGR together with minimal cannibalization to existing Florida casino operators. Under certain scenarios (as indicated), we employ mechanisms in our modeling to minimalize cannibalization to existing casinos.

Of the 20 pari-mutuels outside of Miami-Dade and Broward counties, seven are within a one-hour drive of an existing Florida casino. Under scenarios where these locations could offer a casino we believe it would be nearly impossible to avoid some level of cannibalization of GGR (from visitation within a shared one-hour drive-time boundary, or boundaries). Specifically, of the seven pari-mutuels within a one-hour drive of an existing Florida casino, four are within a one-hour drive of Seminole Hard Rock in Tampa (Derby Lane in Pinellas County, Sarasota Kennel Club in Sarasota County, and Tampa Bay Downs and Tampa Greyhound Track in Hillsborough County). The other three pari-mutuels within a one-hour drive of an existing Florida casino would

primarily impact Seminole casinos, as well as all other pari-mutuel casinos in Broward County (Fort Pierce Jai-Alai in St. Lucie County, Naples Fort Myers Greyhound Track in Lee County, and Palm Beach Kennel Club in Palm Beach County).

To project and yield maximum GGR for Florida, while minimizing cannibalization to existing operators, we assumed the seven pari-mutuels outside of Miami-Dade and Broward counties and within a one-hour drive of an existing casino could have no more than 500 slot machines and/or no more than 15 table games, dependent on expansion scenario (i.e., an illustrative method of applying geographic protection for existing operators).

D. Projecting Employment

We project new and/or incremental direct employment under any gaming expansion scenario (exclusive of destination resorts) as follows:

- 0.4 employees per slot machine
- 5.0 employees per table game
- 0.15 employees per total gaming position

Under this methodology, and as an example, a casino having 1,000 slots and 30 table games would have 727 employees (i.e., 1,000 slots at 0.4 employees plus 30 table games at 5.0 employees, plus 1,180 gaming positions at 0.15 employees).

We project new direct employment under any gaming expansion scenario for destination resorts only as follows:

- Casino-related: 1.0 employees per every $250,000 of GGR
- Hotel-related: 1.0 employees per every $200,000 of hotel-related revenue
- Food and Beverage-related: 1.0 employees per every $122,500 of food and beverage-related revenue
- All other: 1.0 employees per every $650,000 in total revenue

These ratios (applied to destination resorts) were derived by us from the Nevada Gaming Abstract for fiscal year ended June 2012 – and further based on data for all reporting properties on the Las Vegas Strip with $72+ million in annual gaming revenue.

We further assume that each direct employee translates into 0.85 full-time-equivalent employees ("FTEs").

E. Pari-mutuel Casinos

Per the current and applicable Florida statute, we assume each slot machine licensee is limited to 2,000 slot machines per location. Consistent with slot operations at pari-mutuels in

Broward and Miami-Dade counties (inclusive of slot operations at Dania Jai-Alai), we assume any additional racinos throughout the state will operate under the same existing rules and regulations.

For any expansion of racinos outside of Broward and Miami-Dade counties we assume that slot and/or table games operations would be limited to existing operators with pari-mutuel licenses and will occur at the current physical address for each pari-mutuel location. In our modeling we provision for 20 operators with pari-mutuel licenses (outside of Broward and Miami-Dade counties) that are located in 18 different counties, as summarized below:

Figure 2: Florida's non-gaming pari-mutuel licenses

Property	City	County
Melbourne Greyhound Park, LLC	Melbourne	Brevard
Orange Park Kennel Club, Inc.	Jacksonville	Clay
Jacksonville Greyhound Racing, Inc.	Jacksonville	Duval
Pensacola Greyhound Racing, LLP	Pensacola	Escambia
Gretna Racing, LLC	Gretna	Gadsden
Hamilton Downs Jai Alai and Poker	Jasper	Hamilton
Tampa Bay Downs, Inc.	Tampa	Hillsborough
Tampa Greyhound Track	Tampa	Hillsborough
Jefferson County Kennel Club, Inc.	Monticello	Jefferson
Naples Fort Myers Greyhound Track	Bonita Springs	Lee
Ocala Poker & Jai-Alai	Orange Lake	Marion
Palm Beach Kennel Club Poker Room	West Palm Beach	Palm Beach
Derby Lane	St. Petersburg	Pinellas
Sarasota Kennel Club, Inc.	Sarasota	Sarasota
Orlando Jai-Alai & Race Book	Casselberry	Seminole
Sanford-Orlando Kennel Club	Longwood	Seminole
St. Johns Greyhound Park (Bayard Raceways, Inc.)	Jacksonville	St. Johns
Fort Pierce Jai-Alai	Fort Pierce	St. Lucie
Daytona Beach Kennel Club, Inc.	Daytona Beach	Volusia
Ebro Greyhound Park	Ebro	Washington

Source: Florida Department of Business and Professional Regulation, Division of Pari-Mutuel Wagering.

We note that operators with pari-mutuel licenses for Tampa Greyhound Track, St. John's Greyhound Park (Bayard Raceways Inc.) and Jacksonville currently lease out their greyhound racing dates to other locations (i.e., Tampa Greyhound Track leases its dates to Derby Lane; St. John's and Jacksonville run their dates at Orange Park), while there is no live racing occurring at these three facilities. Additionally, Jefferson County Kennel Club no longer offers live racing, although it has applied for racing dates that would begin in March 2014. That leaves 16 locations where live pari-mutuel events are occurring; however, our salient assumption is that all 20 operators with pari-mutuel licenses would seek to operate slot machines.

1. Annual License Fee & Regulatory Fee

Per our understanding, under current law/current administration, slot machine licensees pay an annual license fee of $2 million and a regulatory fee of $250,000.

We assume the opening and consequent operation of slots at both Hialeah Park and Dania Jai-Alai would lead to additional, annually recurring license fees of $4 million and regulatory fees of $500,000.

2. Assessment of Expansion Impact on Regulatory Costs

Florida's gaming and pari-mutuel regulatory costs are paid by the industry, as they typically are in commercial-gaming states. Therefore, the impacts to the State are captured endogenously in the REMI Tax-PI model.

Information related to Division of Pari-Mutuel Wagering's expenditures and revenues appear each year in its annual fiscal report. Gaming taxes, fees and fines are all deposited into the Special Revenue Fund. Expenditures are also reported; they include PMW salaries, lab services, and efforts to prevent compulsive gambling. The fund collects the taxes paid by the racetracks on slot machines but then transfers the money to a trust fund in the Department of Education. In FY 2012, Education received $144.2 million.

Spectrum's review of those annual reports shows that the fund balance for the Special Revenue Fund stood at $7.2 million in FY 2012.[8] The fund carries over its balance from year to year and absorbs deficits if it must. The fund balance has fallen in recent years. In FY 2003, it was $17.9 million.[9]

We note that the fund balance would be much higher if it were not for transfers made to the General Revenue Fund, or the State Treasury. In FY 2012, for example, $22 million was transferred to general revenue. Some $19 million of the $22 million was transferred due to a state law that requires that any "unappropriated funds" in excess of $1.5 million to be turned over to the state Treasury.[10] In other words, after all expenses are paid, almost all surplus funds have to be transferred to the State or general revenue. Since FY 2007, those transfers totaled $132.9 million. On top of that, another $18 million was transferred to the general fund as part of a service charge the state levies against the fund, putting the total amount transferred from the Special Revenue Fund to more than $150 million since FY 2007.[11]

The fund has sustained deficits in three of the last four years. The deficit in FY 2012 was $264,000.

In most other gaming states, the gaming industry is directly billed for regulatory costs. So far, the fees and taxes collected from the gaming industry in Florida have been more than enough to cover the regulatory budget of PMW. The agency's operating budget for FY 2012 was $11.5 million.[12]

[8] FY 2012 PMW Annual Report, p. 34

[9] Spectrum review of PMW annual reports

[10] Section 550.135, Fla. Stat.

[11] Spectrum review of PMW annual reports

[12] FY 2012 PMW Annual Report, p. 37

While the fund is large enough to absorb relatively small deficits, it is difficult to say what the future holds. It appears that the revenue currently generated is clearly enough to pay for PMW's operating budget. If the Special Revenue Fund balance should fall too low, the Legislature could cut back on its general revenue transfers, or as an alternative, PMW would have to reduce expenses if the Legislature wanted to ensure that taxpayers do not have to pay for regulatory gaming costs.

Should the State expand gaming, Spectrum assumes that the assessments on the industry will continue to be sufficient to fund the cost of regulating the pari-mutuel and gaming industries, as is common practice in other commercial-gaming states.

3. Consideration of Gaming-Expansion Impacts on Pari-Mutuel Cardrooms

Spectrum recognizes that existing pari-mutuel operators may be concerned about the impact of slots and/or table games on existing cardroom revenue streams (or gross receipts) – stemming from an expanded casino landscape in Florida that could include casinos at pari-mutuels and/or destination resorts. Absent any specific locations or business models for new casinos (or pari-mutuels that may expand to include slots and/or table games) it would be impossible to quantify what impacts such expansions may have on specific pari-mutuels, but the concerns of such operators warrant a detailed discussion of such issues.

As such, and unless otherwise noted, our GGR and related projections concerning the 12 gaming-expansion scenarios in this report do not incorporate any material increases or decreases in cardroom revenue and/or operations throughout Florida. However, we do provide the following commentary and examples related to potential impact of gaming-expansion on existing pari-mutuel cardrooms.

a. Potential Impact of Slots and/or Table Games on Pari-Mutuel Cardrooms

The following table shows Florida cardroom gross receipts (or revenue) for the fiscal years 2006 through 2013 for each of the racinos with slots (as of end of FY 2013), as well as collectively for racino and non-racino locations. Bear in mind, none of the six racinos had slots during FY 2006.[13]

[13] Excludes Hialeah Park as a racino.

Figure 3: Florida cardroom receipts, 2006-2013

Racino / Segment (Cardroom Gross Receipts, in $M)	Month-Year Opened	*2006*	2007	2008	2009	2010	2011	2012	2013
Gulfstream Park	Nov-06	*$0.5*	$0.2	$0.8	$0.9	$0.9	$0.5	$2.3	$4.6
Mardi Gras	Dec-06	*$0.6*	$1.4	$4.3	$4.0	$5.2	$7.1	$7.1	$7.6
Pompano Park	Apr-07	*$0.1*	$0.0	$0.0	$0.0	$1.2	$4.2	$4.4	$4.0
Magic City	Oct-09	*$0.0*	$1.1	$3.8	$3.9	$3.9	$5.3	$5.1	$5.1
Calder	Jan-10	*$0.8*	$2.1	$1.2	$3.1	$3.5	$4.6	$5.0	$5.1
Casino Miami	Jan-12	*$1.5*	$2.0	$10.3	$9.9	$10.3	$13.1	$13.5	$12.8
Racino Total:		***$3.0***	**$6.6**	**$19.7**	**$21.0**	**$24.1**	**$34.3**	**$35.2**	**$34.6**
Non-Racino Total:		*$41.4*	$47.6	$71.1	$80.7	$80.7	$90.8	$96.2	$98.1
Grand Total:		*$44.4*	$54.2	$90.9	$101.7	$104.8	$125.1	$131.5	$132.7
FL % of Cardroom Rev. from Racinos		***6.8%***	**12.2%**	**21.7%**	**20.7%**	**23.0%**	**27.4%**	**26.8%**	**26.1%**
FL % of Cardroom Rev. from Non-Racinos		*93.2%*	87.8%	78.3%	79.3%	77.0%	72.6%	73.2%	73.9%

Source: Florida Division of Pari-mutuel Wagering

Of the six racino locations, and collectively, cardroom revenue was 11.5 times greater in FY 2013 (with slots) than it was in FY 2006 (before slots). Each of the Florida racinos has experienced significant increases in cardroom revenue in periods with slots, as compared to the last fiscal year without slots. Moreover, in FY 2006 the six racino locations (absent slots at their facilities) combined for 6.8 percent of statewide cardroom revenue; however, in FY 2013 these same six racinos accounted for 26.1 percent of statewide cardroom revenue.

Additionally, even with six of the pari-mutuel locations adding thousands of slots and becoming racinos (as well as with the Seminole Tribe's casinos expanding casino offerings) over this eight-year period, cardroom revenue at non-racino locations has increased significantly – by 2.4 times (from $41.4 million in FY 2006 to $98.1 million in FY 2013).

Our views on these results, and from our experience, are summarized here:

- The demographics of cardroom (or poker) players differ significantly from the mass-market casino player. In properties where we have worked, and at others we have observed, there is little crossover between such groups.

- While most poker players do not cross over to other casino games, they may travel with spouses or other adults who do play casino games, and might be expected to spend money in non-gaming areas, such as hotels, dining and entertainment. The opposite phenomena also holds true, where casino-centric (or slots and/or table games) customers may travel with spouses or other adults who do play poker – and this can serve to increase cardroom revenue.

- Pari-mutuel locations with cardrooms that do expand to offer slots and/or table games (and/or other non-gaming amenities), by definition, would be expending capital and expanding their facilities/offerings, which could create myriad synergies that ultimately induces cardroom demand (i.e., creates new visitation and play).

While it cannot be guaranteed that an expanded casino landscape in Florida would create a positive outcome on cardroom revenue for each and every pari-mutuel operator statewide, we do point to our experience, as well as to the empirical data from Florida's racinos, which indicates that expanded offerings (specifically adding slots to pari-mutuel operations) has not negatively impacted cardroom revenue.

b. Potential Impact of Destination Resorts on Pari-Mutuel Cardrooms

Spectrum recognizes that the majority of pari-mutuels in Florida – all those located outside Broward and Miami-Dade counties – rely on pari-mutuel and poker revenue, and as such they are concerned about the potential impacts of destination resorts in Florida.

If destination casino resorts were built and allowed to operate cardrooms, they may compete against the cardrooms at pari-mutuels – whether the pari-mutuels have slots and tables or not. While the destination resorts may present a competitive threat to the pari-mutuel cardrooms, they may also grow the market by attracting poker players from farther away or those who are currently not attracted to existing cardrooms at existing pari-mutuel locations.

In any event, were the State to allow destination resorts, it would have the option of prohibiting poker operations in them. From our experience, poker operations (or cardrooms) generally comprise a very small percentage of total gaming revenues for casinos, while poker operations are typically a low-margin operation; therefore, we cannot imagine that the inability to offer a poker room would impact prospective bids to develop a destination gaming resort.[14]

Our views are summarized here:

- In our experience, the demographics of both pari-mutuel and poker players differ significantly from the mass-market casino player. In properties where we have worked, and at others we have observed, there is little cross-over between such groups.
- While that may bode well for pari-mutuel operators, we also recognize that both destination resorts and tribal casinos can be expected to include poker as an offering. Again, while most poker players do not cross over to other casino games, they may travel with spouses or other adults who do play casino games, and might be expected to spend money in non-gaming areas, such as hotels, dining and entertainment.
- We also note that policy discussions in Florida – as evidenced in the scenarios we have analyzed here – limit the potential of destination resorts to no more than six.

[14] For the 12 months ended June 2013, revenue from cardrooms was 1.23 percent of GGR for the 23 largest Las Vegas Strip resorts (per Nevada Gaming Control Board), while revenue from cardrooms was 1.6 percent of GGR for the 12 casinos in Atlantic City (per New Jersey Division of Gaming Enforcement).

To be sure, that notion of limited competition would provide scant comfort to an operator who might be forced to compete with a future resort operator in a head-to-head fashion for the same customers and the same discretionary dollars.

We cannot guarantee that there would not be competition, or potential casualties, in such an environment. The ability of any existing operator to succeed or fail under a scenario of head-to-head competition rests on a variety of factors that include, but are not limited to:

- The level and quality of capital investment
- The quality of management and its marketing strategies
- The distance between competitors
- The size of the shared market
- The quality of offerings by each of the competitors
- Respective tax rates and other regulatory or statutory requirements

For guidance, we look to California as a market with some similar characteristics. California has 80 operating cardrooms (and a total of 90 licenses) yet it is home to a relatively new casino industry that generates more than $7 billion a year in annual GGR, making it the largest gaming state in the nation as measured by revenue.[15]

The offerings are clearly different in California than in Florida. In California, cardrooms can offer both poker and some house-banked card games, although the "house" is not the cardroom in such instances, but is a third-party provider that leases space from the cardrooms.[16]

We note that, due to a variety of factors as noted above, some cardrooms perform relatively well, while others struggle. The competition is clearly a factor, but so are macro factors such as the national recession and the decline in housing prices, both of which can have a profound impact on discretionary income in any market, according to our experience.

A 2012 article in the *Sacramento Business Journal* summarizes the situation in that region:

> Card rooms, whose history in California goes back before the Gold Rush days, have mostly shed their seedy image as some operations modernize and as the industry becomes more regulated. But they remain under attack.
>
> They're being outflanked by tribal casinos in Northern California, with their numerous card tables, and continually challenged by a tough economy.
>
> But with the slightest of grins escaping from their poker faces, the Sacramento region's cardroom owners, operators and advisers say business has been good — although not great — and their outlook is positive.

[15] Interviews with Richard Schuetz, member of California Gambling Control Commission, September 19 and 20, 2013.

[16] Ibid.

> Texas Hold'em and Asian games remain popular, they say, and televised poker championship began attracting younger players a decade ago. A state moratorium keeps additional non-tribal cardrooms from setting up shop, and online gambling in California — which would provide an extra revenue stream for cardrooms — still has a shot of being legalized in years to come.[17]

The article goes on to note that the annual revenue of California cardrooms was in decline from 2008 to 2010, where it was estimated at $828.7 million.[18] In 2011, estimated cardroom revenue reached $853 million (up 2.9 percent from 2010).[19] However, that does not necessarily mean that cardroom poker play increased. As noted, the cardrooms also lease out space to third-party providers that offer house-banked games. Much of that increase can be attributed to increases at those games, rather than poker.[20]

Competition with tribal casinos is a factor, albeit an unquantifiable one. As the *Sacramento Business Journal* noted:

> The huge tribal casinos, which added poker rooms to make themselves more competitive with Nevada casinos, have the size and capital to offer every type of gambling plus amenities such as restaurants and spas, in a luxurious environment. Many of California's card clubs, in contrast, are very small with few if any amenities. The big casinos also have big overhead that the little guys don't. The small card clubs also have the advantage of location. They're usually in the heart of a community instead of requiring a longer drive like some of the tribal casinos.[21]

The issue of competition with existing pari-mutuels is one that the Legislature may seek to address as part of any consideration of authorizing destination resorts. Legislative options to lessen the impact include:

- Prohibiting destination resorts – or at least those that would likely compete against pari-mutuels – from offering similar games, including poker and simulcast wagers. We note, however, that this option has its own consequences. Any effort to limit the potential offerings of a destination could impact the business plan of that operator, and result in less capital investment, revenue and employment, although as noted earlier, that would likely not be a material factor.

[17] Kelly Johnson, "Despite tribal casinos, cardrooms draw gamblers," *Sacramento Business Journal*, March 16, 2012; http://www.bizjournals.com/sacramento/print-edition/2012/03/16/despite-casinos-card-rooms-gamblers.html?page=all.

[18] Ibid.

[19] Casino City's Indian Gaming Industry Report 2013 Edition, p. 56-57

[20] Schuetz.

[21] Kelly Johnson.

- Requiring the potential operators of destination resorts to put forth their own comprehensive plans as to how they intend to address – and potentially minimize or eliminate – competitive pressures on existing pari-mutuel operators.

The latter option – particularly in a competitive bidding process – recognizes that casino licensure is a privilege granted to applicants that best meet the state's policy goals, and that privilege comes with concomitant responsibilities such as minimizing the harm to existing state interests. This option also encourages applicants to be more creative in developing their business plans through such means as joint marketing arrangements or other efforts.

4. Capital Investment and Construction-Related Activities

For the additional pari-mutuel casinos throughout Florida that may materialize, we assume two-thirds of the locations would convert existing space (i.e., grandstand) into a casino space while one-third of the locations would build new structures to accommodate their respective casinos.

Our estimates are order-of-magnitude costs conservatively estimated for this project based on our knowledge of casino and entertainment design and construction in Florida and surrounding areas over the past several years. Additionally, our estimates do not provide any provisions for land acquisition, regulatory approvals and permits, environmental analysis or remediation, if necessary, and site work, as additional investigation and engineering are necessary to make such determinations.

The following are illustrative summary of assumptions, construction-related activities and expenses that we believe could occur to accommodate a casino with 1,000 slots-only or a casino having 1,000 slots and 30 table games; along with associated back-of-house area(s) and non-gaming amenities.

a. Grandstand Conversion (Slots Only)

- Assumptions, scope of operations:
  - 1 casino bar and associated back-of-house areas
  - 2 restaurants seating a total of 250 patrons and associated back-of-house areas
    - 1 fine-dining or casual restaurant (150 seats)
    - 1 quick-serve restaurant (100 seats)
  - Surveillance including cameras and recording capabilities
  - Computer system upgrades
  - Administrative space including regulators
  - Flat parking for 500 vehicles
- Construction-related activities and expenses:

- Order-of-magnitude cost of construction, including soft costs of design fees and construction administration, is assumed at $42 million.
- This type of construction project is expected to employ an average of 92 craft tradesmen per day for the duration of the project. It is assumed that the average tradesman spends nine months on a particular construction site; therefore a total of 120 tradesmen will be employed over the expected 12-month project duration. The anticipated craft labor wages for this project is $12.1 million.

b. New Casino Structure (Slots Only)

- Assumptions, scope of operations:
  - 1 casino bar and associated back-of-house areas
  - 1 sports bar and associated back-of-house areas
  - 3 restaurants seating a total of 260 patrons and associated back-of-house areas
    - 1 buffet (120 seats)
    - 1 fine-dining or casual restaurant (100 seats)
    - 1 quick-serve restaurant (40 seats)
  - Surveillance including cameras and recording capabilities
  - Computer system upgrades
  - Administrative space including regulators
  - Approximately 58,000 square feet of newly constructed space
  - Flat parking for 500 vehicles
- Construction-related activities and expenses:
  - Order-of-magnitude cost of construction, including soft costs of design fees and construction administration, is assumed at $55 million.
  - This type of construction project is expected to employ an average of 80 craft tradesmen per day for the duration of the project. It is assumed that the average tradesman spends nine months on a particular construction site; therefore a total of 160 tradesmen will be employed over the expected 18-month project duration. The anticipated craft labor wages for this project is $15.8 million.

c. Grandstand Conversion (1,000 Slots and 30 Table Games)

- Assumptions, scope of operations:
  - 1 casino bar and associated back-of-house areas
  - 3 restaurants seating a total of 300 patrons and associated back-of-house areas
    - 1 buffet (140 seats)
    - 1 fine-dining or casual restaurant (120 seats)

        - 1 quick-serve restaurant (40 seats)
    - Surveillance including cameras and recording capabilities
    - Computer system upgrades
    - Administrative space including regulators
    - Flat parking for 500 vehicles
- Construction-related activities and expenses:
    - Order-of-magnitude cost of construction, including soft costs of design fees and construction administration, is assumed at $48 million.
    - This type of construction project is expected to employ an average of 106 craft tradesmen per day for the duration of the project. It is assumed that the average tradesman spends nine months on a particular construction site; therefore a total of 138 tradesmen will be employed over the expected 12-month project duration. The anticipated craft labor wages for this project is $14 million.

d. New Casino Structure (1,000 Slots and 30 Table Games)

- Assumptions, scope of operations:
    - 1 casino bar and associated back-of-house areas
    - 1 sports bar and associated back-of-house areas
    - 3 restaurants seating a total of 300 patrons and associated back-of-house areas
        - 1 buffet (140 seats)
        - 1 fine-dining or casual restaurant (120 seats)
        - 1 quick-serve restaurant (40 seats)
    - Surveillance including cameras and recording capabilities
    - Computer system upgrades
    - Administrative space including regulators
    - Approximately 81,000 square feet of newly constructed space
    - Flat parking for 500 vehicles
- Construction-related activities and expenses:
    - Order-of-magnitude cost of construction, including soft costs of design fees and construction administration is assumed at $64 million.
    - This type of construction project is expected to employ an average of 94 craft tradesmen per day for the duration of the project. It is assumed that the average tradesman spends nine months on a particular construction site; therefore a total of 188 tradesmen will be employed over the expected 18-month project duration. The anticipated craft labor wages for this project is $18.6 million.

F. Destination Resorts

We assume that "casino/resort complexes" are synonymous with "destination resorts," as defined in Spectrum's Part 1A report (pages 54-57). We further assume each destination resort will meet, or exceed, the following minimal standards/criteria, as was provided in previously introduced Florida legislation:

- A required minimum of $2 billion in new development spending (excluding real estate) for each destination resort during the first five years
- Assumed first full year of operations in 2018
- A minimum of 2,000 hotel rooms
- A minimum of 5,000 gaming positions
- A significant amount of public spaces are non-casino (i.e., non-casino amenities/activities at each location)

We further assume that the physical location of each is the estimated, current population center-point of each applicable county or metropolitan statistical area ("MSA"), as denoted (even though, in practical terms, these center-points may not materialize as viable locations).

1. Capital Investment and Construction-Related Activities

The following is a summary of our construction-related activities and expense assumptions that we believe would occur pertaining to each destination resort:

- Order-of-magnitude cost of construction, including soft costs of design fees and construction administration, is assumed at $2 billion.
- This type of construction project is expected to employ an average of 1,304 craft tradesmen per day for the duration of the project. It is assumed that the average tradesman spends nine months on a particular construction site; therefore a total of 5,216 tradesmen will be employed over the expected 36-month project duration. The anticipated craft labor wages for this project is $563.2 million.

These estimates are order-of-magnitude costs conservatively estimated for this project based on our knowledge of casino and entertainment design and construction in Florida and surrounding areas over the past several years.

Our analysis does not provide any provisions for land acquisition, regulatory approvals and permits, environmental analysis or remediation, if necessary, and site work, as additional investigation and engineering are necessary to make such determinations.

G. Ramp-Up Period

Our GGR projections for new and/or expanded casinos throughout Florida do not include adjustments for a ramp-up (nor ramp-down) of operations. In our experience, many new casinos experience some degree of revenue ramp-up during at least their first two years of operations, when marketing initiatives and customer trial and retention contribute to early growth in the business. Such a ramp-up should not be considered inevitable, as some properties open strongly.

For some properties, however, the first two years tend to be significantly weaker than the third year, when operations generally stabilize and revenue growth slows to a growth level nearer the rate of inflation (absent significant marketing events, expansion or competitive changes). However, the likelihood, as well as the effects, of a ramp-up period may be more pronounced for a new casino that enters into an area/region/market where casinos are already existing and a competitive operating environment exists.

To illustrate the ramp-up phenomenon, Spectrum gathered slot revenue results from 13 casinos (all racinos) in the Northeast, where all opened within a 37-month period between January 2004 and February 2007. Slot revenue results are shown in annualized amounts for successive 12-month periods measured from the first full month of each casino's operations. The result set is shown in the following table:

Figure 4: Ramp-up of slot revenue in the Northeast, 2004-2007

Racino Location	Open Date	Year 1 slot rev. ($M)	Year 2 slot rev. ($M)	Year 3 slot rev. ($M)	Year 1 % of Year 3	Year 2 % of Year 3
Saratoga NY	Jan-04	$83.5	$105.7	$118.9	70.2%	88.9%
Finger Lakes NY	Feb-04	$63.0	$73.6	$87.3	72.2%	84.3%
Fairgrounds NY	Mar-04	$34.4	$39.4	$42.0	81.9%	93.8%
Monticello NY	Jun-04	$62.8	$74.4	$71.0	88.5%	104.8%
Batavia NY	May-05	$23.1	$24.8	$30.5	75.7%	81.3%
Hollywood ME	Nov-05	$36.5	$43.5	$50.0	73.0%	87.0%
Tioga NY	Jul-06	$41.6	$45.2	$48.6	85.6%	93.0%
Empire City NY	Oct-06	$364.1	$481.4	$531.6	68.5%	90.6%
Vernon NY	Oct-06	$33.4	$36.9	$36.6	91.3%	100.8%
Mohegan Sun PA	Nov-06	$176.1	$187.9	$250.2	70.4%	75.1%
Parx PA	Dec-06	$305.9	$400.6	$439.1	69.7%	91.2%
Harrah's PA	Jan-07	$329.5	$369.7	$375.8	87.7%	98.4%
Presque Isle PA	Feb-07	$172.2	$182.4	$186.3	92.4%	97.9%
Average		**$132.8**	**$158.9**	**$174.5**	**76.1%**	**91.1%**

Source: Pennsylvania Gaming Control Board, New York Lottery, Maine Department of Public Safety, Spectrum Gaming Group

As illustrated, the average result for the 13 casinos indicates that the first-year slot revenue from a new casino is 76.1 percent of the third-year slot revenue result, while the second-year slot revenue from a new casino is 91.1 percent of the third-year slot revenue result. We note that first-year slot revenue was less than third-year slot revenue for all 13 casinos in our example, while second-year slot revenue was less than third-year slot revenue for 11 of the 13 casinos in our example (85 percent of sample). The average ramp-up in slot revenue from the first year to the second year was 19.7 percent.

H. Modeling Economic Impacts

1. General

The REMI analysis began with the calibrated Tax-PI budget provided by the Florida Office of Economic and Demographic Research ("EDR"), an arm of the Florida Legislature. This budget was calibrated by EDR's experts to reflect the General Appropriations Bill for FY 2012 and information from the *Florida Tax Handbook*. The *Tax Handbook* provides "statutory and administering authority for all specific revenue sources, and a review of tax collections and disposition, in conjunction with base and rate information and a brief history of sources."[22] A change was made to the default drivers of pari-mutuel and slots tax revenue: it was changed from demand to output. This adjustment better captures the nature of the tax revenue changes in these analyses.

2. REMI Tax-PI

REMI's Tax-PI is a new tool for evaluating the total fiscal and economic effects of tax policy changes. Tax-PI is based on more than 30 years of experience in modeling the economic effects of tax-policy changes. As states begin to demand better methods for estimating the economic and fiscal impacts of alternative tax scenarios, they look to experts to respond with sophisticated, flexible and relevant tools that can meet their needs.

Tax-PI is a dynamic fiscal and economic impact model that captures the direct, indirect and induced fiscal and economic effects of taxation and other policy changes over multiple years (up to the year 2060). It can model the complete dynamic economic and demographic impacts of any manner of tax policy change. States need to thoroughly evaluate both the short- and long-term effects of any tax changes in order to best serve the needs of the people. Tax-PI allows state agencies to do this with a model backed by years of dependability and experience. Highlights include:

- Budget Editor: Customizable tables that users calibrate to reflect actual or projected revenue and expenditure details for the current, past or future fiscal years.
- Taxes: Dynamic capability to adjust state-specific tax revenues. Users assign tax-specific variables to each of the custom revenue categories in order to track the fiscal effects of policy changes along with the economic effects. There is also a built-in feedback mechanism that automatically feeds revenue impacts back into the model to account for price and disposable income changes, therefore adjusting government spending accordingly.

[22] Florida Revenue Estimating Conference, *Florida Tax Handbook, Including Fiscal Impact of Potential Changes,* p. ix; accessed via http://edr.state.fl.us/Content/revenues/reports/tax-handbook/taxhandbook2013.pdf.

The first step in using Tax-PI is to calibrate the model with a customized budget. A user begins this task by including at least one year of revenue and expenditure data into the budget. After the revenues and expenditures are integrated and itemized, each line item must be assigned an economic indicator. The economic indicator can be thought of as the "driver" for the revenue or expenditure item; as the indicator grows, the tax revenue grows as well. And as the indicator declines, the revenue declines with it. Potential economic indicators include variables such as output, demand, personal income and population, among others.

After the economic indicators are chosen and properly calibrated for each line item of revenues and expenditures, an appropriate policy variable must be chosen for each item as well. While the economic indicator can be thought as the driver of each revenue and expenditure item, the policy variable can be considered what is driven by the item. In other words, while changes in indicators impact the line items, changes in line items impact the policy variables. Potential policy variables include consumer price, personal taxes, production cost and government spending, among others.

Once the budget is properly calibrated with the revenue and expenditure data and the appropriate indicators and policy variables for each line item, the user creates a fiscal baseline within Tax-PI. This is done by recalibrating the Standard Regional Control that REMI generates with the updated budget. The Standard Regional Control can be thought of as the baseline forecast for the region of analysis. Therefore, this recalibration process effectively integrates the fiscal data with the economic and demographic trajectory of the region. The ensuing result gives us a fiscal forecast, or baseline, that any fiscal impact is ultimately measured against.

As soon as the fiscal forecast is generated, the user can run simulations in Tax-PI and assess the economic, demographic and fiscal impact of any given scenario. Tax-PI outputs include, but are not limited to:

- Economic results: Employment, Gross State Product, output, value added, personal income.
- Demographic results: Population by cohort (gender, ethnicity and age), economic migration.
- Fiscal results: Total revenues, total expenditures, customized budget line items.

3. Additional Model Information

REMI provides detailed descriptions of the data, methods and equations used to develop its models on the REMI website. The total amount of information would add considerable length to this report, so we have provided links below to relevant documents that are freely available. In general, these documents can be found under the "Resources" section of REMI's website.

- Data sources and estimation procedures: http://www.remi.com/download/documentation/pi+/pi+_version_1.4/Data_Sources_and_Estimation_Procedures.pdf

- Model equations: http://www.remi.com/download/documentation/pi+/pi+_version_1.4/PI+_v1.4_Model_Equations(2).pdf
- Summary of data sources:
- http://www.remi.com/download/documentation/pi+/pi+_version_1.4/REMI_PI+_v1.4.pdf

4. Methodology for Fiscal Analysis of Casino Expansion Scenarios

The vital inputs to the REMI analysis were the estimates of GGR, non-gaming revenue, employment, initial tax revenue changes and construction costs from the analysis conducted by the other team members, as discussed above. Here we will constrain the conversation to the changes REMI made to these numbers. The first calculation was to establish a baseline scenario. A baseline is necessary for an impact analysis because such an analysis implies a change from one state to another. Without this initial condition, there can be no change. As noted elsewhere, for the baseline we chose the current law, current administration fiscal and legal framework. Most important for the purposes of this study, this framework includes the expiration of banked card game exclusivity with the Seminole Tribe. The agreement expires in August 2015, after which the Seminole Tribe has 90 days to cease banked card games, meaning that November and December would be the only months without such games. For modeling purposes, we assumed that the card games conclude at the end of 2015. Every other scenario that had changes in GGR and employment (11 in total) was run relative to this scenario, i.e., the inputs to Tax-PI were the difference between the two scenarios.

Spectrum's estimates were for 2013, which is the year the Tax-PI simulations begin. However, these simulations continue to 2024, meaning that the initial-year estimates must be adjusted for both inflation and the growth in the population of Floridians age 21 and over. Tax-PI's forecasts for both of these factors were used to make the necessary adjustments. REMI's inflation assumption for consumer prices is approximately 2 percent per year, which is a historically appropriate rate. The population forecast relies on Florida-specific birth and survival rates and REMI's estimates of migration to provide total population growth over time.

The pari-mutuel locations and the destination resorts are classified under different sectors according to the North American Industry Classification System ("NAICS"). Pari-mutuels are under amusement, gambling and recreation while casino hotels are under accommodations. These are the industry sectors that were used in this analysis.

REMI's modeling must account for the difference in the revenue per employee (i.e., labor productivity) of a gambling establishment relative to other establishments classified under the same NAICS industry. For example, while both are under the accommodations sector, a casino hotel will have significantly more revenue per employee than a normal four-star hotel. The analysis adds in this missing revenue but makes an additional assumption regarding productivity growth in the gambling industries.

Our analysis assumes that the employment at the sites remains constant at the 2013 level while revenues grow with the adult population. This assumption lies between two other options: the first being that productivity grows at the same rate as the aggregate sector (i.e., amusement or accommodations) and the other that productivity does not grow at all. We easily can dismiss the latter option as unrealistic. The former, while possible, is not likely due to the nature of the employment at gambling establishments, especially with the growth in popularity of table games and non-gambling amenities. The presence of dealers, bartenders, wait staff, retail clerks, etc., will probably limit the productivity gains that the sector will see. In fact, if the gambling sector's productivity rises at the same rate as the larger sector, we would see employment fall over time.

To summarize, our assumption of constant employment falls between one assumption that would see employment increase unrealistically and another that would see employment fall unreasonably.

Of the scenarios that REMI analyzed, only scenarios A and B excluded any construction. The construction spending entered the model as demand and with the assumption that all construction began in the first simulation year.

Any increase in total revenues for the gambling establishments was assumed to come at the expense of existing spending. In other words, we assumed that the total amount of money available to Floridians to spend is not changing, thus any new spending on gambling would have to be diverted from other consumption. We reduced consumption across all consumption items proportionally to their significance in the consumption basket. This assumption includes lottery spending, which is affected by its prevalence in the household budget only. The total reduction was weighted to include the in-state proportion of visitors given by the gravity model.

In determining the economic impacts for each scenario under different tax rates, we created four largely identical simulations with the only difference being the underlying budget. The default budget was that provided by the Florida Office of Economic and Demographic Research (the "Default Budget"). That labeled *Florida pari-mutuel gaming tax rate* reflects all gambling taxed at Florida's prevailing pari-mutuel slots rate of 35 percent; that labeled *US median gaming tax rate* reflects all gambling taxed at the national median rate of 27 percent; and that labeled *Pennsylvania gaming tax rates* reflects all gambling in Florida taxed using the rates prevailing in Pennsylvania of 54 percent for slots and 12 percent for table games. The results will be very similar in their employment and Gross State Product numbers, which is a reflection of their identical inputs.[23] The differences will be mainly apparent in the revenues, which show us how different rates affect the state's ability to gain revenue from expanded gaming. The average is that over the entire simulation period (2015-2024).

[23] Employment is the count of jobs relative to the base case scenario and is not cumulative. Gross state product is the net new economic activity generated in the state.

An additional source of revenue for Florida is from the revenue-sharing Compact with the Seminole Tribe ("Seminole Compact" or "Compact"). These revenues were calculated for each of the scenarios A-J and combinations using the estimates of tribal GGR over time and the appropriate marginal sharing rates. It should be noted that many of the scenarios would end revenue sharing which is noted in the text description.

The revenue-sharing estimates were derived from the estimated direct changes in tribal GGR and as such do not include any secondary effects of economic expansion. For example, when a scenario causes there to be more income, some of that income would be spent at Seminole casinos causing more GGR and Compact revenue. However, given that the scenarios all capture some kind of gaming expansion, we cannot be sure where this additional income would be spent and therefore cannot accurately measure induced changes in tribal GGR *separately* from the larger gambling environment. This assumption causes Compact revenues to be underestimated from their likely amounts.

The table below highlights the results that will be provided for each of the scenarios that follow in the main body of the report. All results are presented in terms of absolute annual differences relative to the Baseline scenario. In other words, it is the difference between "what would have been" and "what now shall be." These results do not carry over values from the previous year and therefore are not cumulative. The results are statewide impacts for Florida.

Figure 5: The statewide fiscal impacts results explained

Category	Explanation
Employment	Employment comprises estimates of the number of jobs, full-time plus part-time, by place of work. Full-time and part-time jobs are counted at equal weight. Employees, sole proprietors, and active partners are included, but unpaid family workers and volunteers are not included.
Gross State Product	Gross State Product is the market value of goods and services produced by labor and property in Florida, regardless of nationality. Gross State Product can be interpreted as net new economic activity.
Gaming Taxes	The sum of state taxes levied on non-tribal gaming activity.
Sales/Use Tax	Total sales and use taxes collected by the state.
Lottery	The revenue to the state from the lottery.
Compact Revenues	The revenue to the state from the gaming Compact with the Seminole Tribe.
All other Revenues	All other state revenues not included above.

Source: Spectrum Gaming Group, Regional Economic Models Inc.

5. Methodology for Fiscal Analysis of Patron Spending

a. General

The scenarios in this section relied on data from other sections of the report, namely the GGR per visit and participation rate for Florida resident and non-resident gamblers. Another key piece of information was visitor numbers for 2012 obtained from the website of Visit Florida.[24] Spending per group was taken from the University of Florida survey conducted for this study (see Chapter III). Much as in Chapter II, the data provided by the other team members was for 2013,

[24] See http://www.visitflorida.com/en-us/media/research.html

which means it must be adjusted for inflation and population growth. We pulled this data from Tax-PI as above.

Lastly, every section required various assumptions to transform survey results into new spending. Whenever there was any ambiguity, we chose to err on the side of assumptions that would result in more conservative economic impacts. GGR was divided between pari-mutuels and resort casinos according to the current allocation of GGR.

This section of the report does not include any estimates of revenues gained through the Compact with the Seminole Tribe. The survey questions posit an expansion of gaming without specifying its exact nature therefore it is possible there could be no revenue sharing under some of these scenarios or that the gaming environment could change in such a way that visitors prefer non-tribal venues. These ambiguities make estimating Compact revenues for these scenarios inaccurate at best, so we have elected to exclude them.

b. Section A

This section describes the impact of current visitors extending their stay due to the presence of expanded gaming opportunities. Of all survey respondents, 14.9 percent answered "Yes" to the question. The survey also provided the length of additional time that the "Yes" respondents would stay. Answers ranged from one day to 365 days. Obviously, someone who wants to extend his stay by one year is no longer merely a tourist, from a behavioral standpoint. However, even for those who chose a shorter duration, we had to make some assumptions around how to handle their expenditures for their stay.

Key assumptions:

- Number of new visitors is 14.9 percent of adult visitors to Florida.
- All gambling done in Florida is reallocated from gambling that would be done out-of-state. Given the nature of this survey question, we believe that this is a fair assumption.
- The only additional spending occurring during the extended stay goes to GGR. We did not assume any additional tourist spending because the lengths of stay suggested by the survey would imply many different potential spending outcomes. This assumption reduces the size of the positive impact of this scenario.
- The number of "Yes" respondents was not reduced by the participation rate in gambling activities because the nature of the question implies that only people who want to gamble would answer "Yes."
- We created a weighted average of spending per person from the mix of respondents who answered that they would extend their stay from one to three days. We did not use those staying longer in this calculation because any additional days beyond three would result in per-person gambling expenditures far above the average annual gambling budget for

Americans taken from the survey ($533.19 per person). Weighted average gambling spending for the additional stay was $412 per person.

c. Section B

This section describes the impact of the increase in Florida-based gambling by residents who currently gamble out of state. Of all respondents, 47.6 percent answered "Yes" to the question.

Key assumptions:

- For this simulation, the word "likely" is assumed to mean "will."
- The number of gamblers is 47.6 percent of the adult population in Florida, adjusted for the participation rate of gambling in the state.
- No reallocation of spending is made because the survey question implies that the money is being repatriated from out of state.

d. Section C

This section describes the impact of the increase in Florida-based gambling by residents who currently do not gamble but would if additional activities were available. Of all respondents, 31.8 percent indicated some kind of willingness to participate in expanded gaming activities. The survey asked the non-gamblers to state – one a scale of 1 through 5, with 1 being "Not at all likely" and 5 being "Extremely likely" – how likely they were to gamble in Florida if gaming were expanded.

Key assumptions:

- We assigned percentage likelihoods to the 1-5 scale ranging from 0 percent to 100 percent in 25 percent increments, e.g., someone answering 3 would have a 50 percent likelihood of actually gambling.
- These percentages were then used to scale the percentage of the population who answered the survey. For example, 12.8 percent answered 3 on the survey, leading to a 6.4 percent increase in gamblers from this group (12.8% x 50% = 6.4%).
- The number of gamblers is the sum of the scaled percentages times the Florida adult population.
- This scenario includes a reallocation of spending away from other activities toward gambling since this group represents residents who do not currently gamble.

e. Section D

This section describes the impact of the increase in visitors to Florida rather than an alternative destination due to the availability of gaming. Of all respondents, 12.1 percent answered "Yes" to the question.

Key assumptions:

- The spending for this group is very high ($3,205), so we assumed it to be a per-household number rather than a per-person number.
- The spending from this group was allocated across all tourism spending categories proportional to existing amounts. While the question asks if people would be more likely to visit Florida due to expanding gaming, it seems unreasonable to assume that the only activity they would engage in while there would be gambling.
- New spending is the total number of new visitors adjusted for average household size in the United States. This data was obtained from the US Census Bureau.[25]

f. Section E

This section describes the impact of the decrease in visitors to Florida due to the expansion of gaming. Of all respondents, 3.8 percent answered "Yes" to the question. All assumptions are like those for Section D above, except the simulation is the removal of spending rather than the increase in spending.

I. Assessment of Gaming Expansion Combined with Option to End Live Pari-Mutuel Performances

The Legislature tasked Spectrum to examine the impacts of certain gaming-expansion scenarios combined with "pari-mutuel facilities given the flexibility to end live performances, with the supplementation of horse purses and awards calculated as percentage of statewide GGR, rather than by facility." Such analyses are presented as sub-scenarios and titled as "(with Option to End Pari-mutuels Live Events)" under applicable GGR and Related Projections and Economic/Fiscal Impacts sub-sections.

As noted in Chapter II(D)(5), Spectrum believes that the number of pari-mutuel facilities offering live events would decline from 25 to 15 if operators were allowed to cease live racing. In FY 2013, there were 13 greyhound tracks, six horse-racing tracks and six jai alai frontons that conducted live pari-mutuel events. Based on our research, Spectrum projects that a decoupling law would result in the closure of six of the 13 greyhound tracks, three of the six jai alai frontons and

[25] US Census Bureau, *Households and Families: 2010,* p. 1; accessed via http://www.census.gov/prod/cen2010/briefs/c2010br-14.pdf

a quarter-horse track that offered barrel racing. And of those facilities that would continue to operate, some would offer far fewer races or games than they do now.

The facilities that stop offering live pari-mutuel events would continue to operate a cardroom or a casino, as those sectors are profitable and have been earning enough revenue to cover the losses incurred from offering live racing/games. The greyhound operators we interviewed stated that they did not expect to see a decline in their cardroom activity as a result of ceasing live racing. Attendance is so low at greyhound tracks that, for the most part, it is no longer recorded. Live handle at the tracks that would close is *de minimis*. For example, it totaled less than $117,000 at Melbourne in FY 2013. It was just over $200,000 at Jefferson County Kennel Club. Three of the tracks that would close – Ebro, Jefferson and Pensacola – do not offer inter-track wagering, which means their patrons do not bet on races held at other Florida tracks and their races are not sent to other Florida tracks for patrons to wager on. This fact is clearly a sign that greyhound wagering at Ebro, Jefferson and Pensacola is nearly non-existent. The live handle at the tracks that we suspect would close accounted for just 9 percent of statewide live greyhound handle.

Based on Spectrum's experience studying gaming and racing markets across the country and on interviews and surveys conducted specifically for this Florida study, we believe that ceasing live racing at the pari-mutuel facilities noted above would have no impact on the state's gaming industry under any scenario. Operators note that a patron who wagers on greyhound racing is normally not a poker player. The same holds true with jai alai, according to operators we spoke with. (We note that two jai alai facilities, Hamilton and Ocala, had zero live handle in FY 2013.[26]) In horse racing, operators say they do see some crossover effect and that gross gaming revenue does increase when live racing is held. However, we do not expect any of the horse-track operators to cease live racing.

As noted above, the Legislature further directed Spectrum to assume that all horse-racing purses would be supplemented by statewide gross gaming revenue (from state-regulated casinos). We determined that a reasonable supplemental purse fund for the state's five horse-racing tracks would be $31.2 million, based on actual and assumed contributions from gross gaming revenue to purses from the horse tracks operating in FY 2012:

- Pompano Park, $2.6 million
- Gulfstream, $7.8 million
- Calder, $8.8 million
- We further assumed $8.3 million for Tampa Bay Downs, which is the average of Gulfstream and Calder. (We note that Tampa Bay Downs does not have a casino.)

[26]PMW annual report, 2013, http://www.myfloridalicense.com/dbpr/pmw/documents/Stats/HandleandCardroom2012-2013--2013-08-05--June--YTD.pdf.

- We assumed Hialeah Park, which opened its casino in August 2013, to have a yearly GGR contribution of $3.8 million toward purses.

We also assumed that the supplemental purse fund would be funded by an incremental GGR tax; i.e., in addition to the 35 percent pari-mutuel slot operators currently pay. We also assume the $31.2 million supplemental purse fund is static throughout the expansion scenarios analyzed. Therefore, the incremental, effective tax rate to fund the purses would decline as more casinos open and/or more GGR is generated statewide under these scenarios. This incremental, effective rate is provided in each sub-scenario.

As applicable, by expansion scenario, we assume a decoupling law would cause a 10 percent reduction in statewide live racing activity. The assumption translates to a 10 percent reduction in jobs in the pari-mutuel sector and a 10 percent reduction in non-gaming revenue. These reductions are relative to the Baseline scenario.

II. Gaming Expansion Scenarios

Throughout this section, Spectrum provides gross gaming revenue ("GGR") and related projections, economic/fiscal analyses, as well as general discussion and our evaluation of the Florida casino industry as it currently exists/operates (reflecting current law/current administration), as well as under a variety of potential gaming expansion scenarios.

The gaming expansion scenarios were provided by the Legislature. For each scenario, we provide a brief analysis of the implications and considerations if a scenario were to be implemented, while we endeavor to provide relevant examples and/or empirical data from other jurisdictions that may be applicable to Florida under any of these scenarios.

Spectrum prepared and analyzed the gaming expansion scenarios provided by the Legislature, summarized as follows:

- **Baseline**: The Florida casino landscape reflects current law/current administration and that the banked card provision of the Compact will not be renewed.
- **Scenario A**: Renewal of the Seminole Tribe's exclusive authorization to conduct banked card games on Indian lands, as defined in the Indian Gaming Regulatory Act.
- **Scenario B**: Granting the Seminole Tribe exclusive authorization to offer table games on Indian lands, as defined in the Indian Gaming Regulatory Act.
- **Scenario C**: Regulating, prohibiting, restricting and/or taxing simulated casino-style gambling at Internet sweepstakes cafes, arcade amusement centers or truck stops. This scenario was subsequently modified to discuss the implications of the prohibition of these types of casino-style gambling.
- **Scenario D**: Modifying or repealing live racing requirements for pari-mutuel facilities, including evaluation of impacts on purses and award for all forms of pari-mutuel activity.
- **Scenario E**: Changing tax rates for Class III games at pari-mutuel facilities.
- **Scenario F**: Adjusting restrictions on the number and operation of slot machines at pari-mutuel facilities in Miami-Dade and Broward counties.
- **Scenario G**: Authorizing pari-mutuel facilities in counties other than Miami-Dade and Broward to offer slot machines.
- **Scenario H**: Authorizing pari-mutuel facilities to conduct table games or other Class III games.
- **Scenario I**: Authorizing a limited number (two) of casino/resort complexes in Miami-Dade and/or Broward counties.

- **Scenario J**: Authorizing a limited number (six) of casino/resort complexes around the state.
- **Scenario K**: Authorizing a limited number (two) of casino/resort complexes in Miami-Dade and/or Broward counties and authorizing pari-mutuel facilities in Miami-Dade and Broward counties to conduct table games or other Class III games.
- **Scenario L**: Authorizing a limited number (six) of casino/resort complexes around the State and authorizing all pari-mutuel facilities statewide to offer both slots and table games (or other Class III games).

Additionally, under certain of the 13 aforementioned scenarios, we prepared sub-scenarios to show impacts of the following:

- Minimizing cannibalization of GGR to existing casinos.
- Maximizing statewide GGR levels.
- Pari-mutuel facilities having the ability to end live performances, with supplementation of horse purses and awards calculated as percentage of statewide GGR, rather than by facility.

Our economic/fiscal analyses omit two scenarios: C, because gaming in non-casinos is prohibited (as discussed in Chapter II[C]); and D, because modifying or repealing live-racing requirements does not impact analysis of gaming facilities.

Importantly, under all scenarios in this chapter, please note the following:

- All revenue projections are expressed in current dollars (unless specifically noted otherwise).
- As applicable, revenue projections and resultant fiscal impacts are adjusted for future years based upon REMI's forecasted inflationary growth, as well as with respect to changes in adult population.
- All projections include slot operations at Hialeah Park, for which we assumed a September 1, 2013 opening date (although it actually opened August 14, 2013), and at Dania Jai-Alai, for which we assume an opening date of July 1, 2014.

Baseline: Expiration of Banked Card Provision of Seminole Compact

The salient assumption under this scenario is that the Florida casino landscape reflects current law/current administration and the banked card provision of the Compact is not renewed. Specifically, under this scenario, on August 1, 2015, the Seminole Tribe will no longer be authorized to conduct such games – while the Seminole Tribe would have 90 days to close such games (we do not account for a partial year in our GGR and related projections, therefore we assume the Baseline scenario is effective January 1, 2016 – or calendar year 2016). Furthermore, all Seminole revenue-sharing ceases after 2030. This scenario assumes the existing quantity and locations of casinos in Florida do not change.

1. Implications and Considerations

It is our understanding that if this scenario were to occur, revenue sharing per the Seminole Compact would be impacted. Specifically, revenue sharing would exclude net win generated at the Seminole Tribe's Broward County facilities.

Expiration of the banked card provision of the Seminole Compact would help to level competitive playing field between the pari-mutuel casino industry and the Seminole casino enterprise, which currently offer banked card games. The absence of table games from the two Seminole Hard Rock casinos could result in a decline in tourism from higher-end gamblers who patronize these destination resort casinos instead of other options in Las Vegas, Atlantic City, Biloxi, or other jurisdictions where table games are offered.

2. GGR and Related Projections

As of June 30, 2013, we estimate there were 344 banked card table games in operation at five Seminole casinos (excluding their Brighton and Big Cypress operations). Under this scenario, we assume for modeling purposes that these table games would be removed from operations effective January 1, 2016.

Under this scenario, we project the eight pari-mutuels with slot machines would generate $648.4 million of gross slot revenue, with net slot revenue of $583.6 million. This level of revenue would result in revenue due to the State as follows:

- $204.3 million under the current 35 percent rate of net slot revenue.
- $157.6 million at the US median effective GGR tax rate of 27 percent.
- $315.1 million at the effective rate(s) in Pennsylvania (i.e., Pennsylvania's slot and table rates to Florida's slot and table GGR, respectively).[27]

[27] See Chapter II(N)(2) below for detail on the Pennsylvania tax model.

We estimate the eight Native American casinos would have $1.81 billion of combined slot and table games revenue. Therefore, we estimate GGR from Florida's 16 casinos would be $2.46 billion.[28] A summary of this scenario is in the following table:

Figure 6: Baseline – expiration of banked card provision of Seminole Compact, landscape and projections

Florida Casinos	Baseline Scenario			
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total
# Locations	8	8	0	16
# Counties	2	6	0	6
# Slots	8,409	14,564	0	22,973
# Table Games	0	0	0	0
# Gaming Positions	8,409	14,564	0	22,973
GGR ($M)	$648.4	$1,807.3	$0.0	$2,455.7
GGR / Position / Day	$211	$340	$0	$293

Source: Spectrum Gaming Group

Additionally, we project the statewide casino participation rate would be 23.1 percent; the rate for adults residing within a one-hour drive of a casino would be 32 percent and the rate would be 11.8 percent beyond a one-hour drive.

3. Economic/Fiscal Baseline

The following tables show the levels of baseline scenario taken from the Tax-PI model. Each of the economic and fiscal impacts below show the difference relative to these values.

[28] As noted at the beginning of Chapter III, all GGR projections in each of the scenarios are in current dollars and, as applicable, the projections and resultant fiscal impacts will be adjusted for future years based upon REMI's forecasted inflationary growth, as well as with respect to changes in adult population.

Figure 7: Baseline levels, default budget (Baseline tables only: jobs in thousands, $ in nominal billions)

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	10,567	10,736	10,924	11,073	11,201	11,278
Gross State Product	$954	$1,005	$1,062	$1,120	$1,177	$1,233
Gaming Taxes	$0.22	$0.22	$0.22	$0.22	$0.23	$0.23
Sales/Use Tax	$22.75	$23.98	$25.24	$26.51	$27.89	$29.34
Lottery	$1.78	$1.80	$1.83	$1.85	$1.88	$1.90
Compact Revenues	$0.23	$0.11	$0.11	$0.11	$0.11	$0.11
All other Revenues	$42.92	$43.50	$44.80	$46.30	$47.78	$49.19
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	11,319	11,341	11,380	11,452	11,073	
Gross State Product	$1,287	$1,343	$1,401	$1,466	$1,120	
Gaming Taxes	$0.23	$0.23	$0.24	$0.24	$0.22	
Sales/Use Tax	$30.85	$32.43	$34.10	$35.85	$26.51	
Lottery	$1.93	$1.95	$1.97	$2.00	$1.85	
Compact Revenues	$0.11	$0.12	$0.12	$0.12	$0.11	
All other Revenues	$50.85	$52.53	$54.25	$56.05	$46.30	

Source: Spectrum Gaming Group, Regional Economic Models Inc.

Figure 8: Baseline Levels, at pari-mutuel rates (Baseline tables only: jobs in thousands, $ in nominal billions)

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	10,567	10,736	10,924	11,074	11,202	11,279
Gross State Product	$954	$1,005	$1,062	$1,120	$1,177	$1,233
Gaming Taxes	$0.23	$0.24	$0.25	$0.26	$0.27	$0.28
Sales/Use Tax	$22.75	$23.98	$25.24	$26.51	$27.89	$29.34
Lottery	$1.78	$1.80	$1.83	$1.85	$1.88	$1.90
Compact Revenues	$0.23	$0.11	$0.11	$0.11	$0.11	$0.11
All other Revenues	$42.92	$43.50	$44.80	$46.30	$47.78	$49.19
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	11,319	11,342	11,381	11,453	11,074	
Gross State Product	$1,287	$1,343	$1,401	$1,466	$1,120	
Gaming Taxes	$0.29	$0.29	$0.30	$0.31	$0.26	
Sales/Use Tax	$30.85	$32.43	$34.10	$35.85	$26.51	
Lottery	$1.93	$1.95	$1.98	$2.00	$1.85	
Compact Revenues	$0.11	$0.12	$0.12	$0.12	$0.11	
All other Revenues	$50.85	$52.53	$54.25	$56.05	$46.30	

Source: Spectrum Gaming Group, Regional Economic Models Inc.

Figure 9: Baseline levels, at US median gaming tax rates (Baseline tables only: jobs in thousands, $ in nominal billions)

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	10,566	10,735	10,923	11,073	11,201	11,278
Gross State Product	$954	$1,005	$1,062	$1,120	$1,177	$1,233
Gaming Taxes	$0.19	$0.19	$0.20	$0.21	$0.21	$0.22
Sales/Use Tax	$22.75	$23.97	$25.24	$26.51	$27.89	$29.34
Lottery	$1.78	$1.80	$1.83	$1.85	$1.88	$1.90
Compact Revenues	$0.23	$0.11	$0.11	$0.11	$0.11	$0.11
All other Revenues	$42.92	$43.50	$44.80	$46.30	$47.78	$49.19
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	11,319	11,341	11,380	11,453	11,073	
Gross State Product	$1,287	$1,343	$1,401	$1,466	$1,120	
Gaming Taxes	$0.23	$0.23	$0.24	$0.25	$0.21	
Sales/Use Tax	$30.85	$32.43	$34.10	$35.85	$26.51	
Lottery	$1.93	$1.95	$1.97	$2.00	$1.85	
Compact Revenues	$0.11	$0.12	$0.12	$0.12	$0.11	
All other Revenues	$50.85	$52.53	$54.25	$56.05	$46.30	

Source: Spectrum Gaming Group, Regional Economic Models Inc.

Figure 10: Baseline levels, at Pennsylvania gaming tax rates (Baseline tables only: jobs in thousands, $ in nominal billions)

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	10,570	10,738	10,926	11,076	11,204	11,280
Gross State Product	$954	$1,006	$1,062	$1,120	$1,178	$1,233
Gaming Taxes	$0.35	$0.36	$0.37	$0.39	$0.40	$0.41
Sales/Use Tax	$22.75	$23.98	$25.24	$26.51	$27.90	$29.35
Lottery	$1.78	$1.80	$1.83	$1.85	$1.88	$1.90
Compact Revenues	$0.23	$0.11	$0.11	$0.11	$0.11	$0.11
All other Revenues	$42.93	$43.51	$44.80	$46.30	$47.78	$49.20
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	11,321	11,344	11,382	11,455	11,076	
Gross State Product	$1,287	$1,343	$1,402	$1,466	$1,120	
Gaming Taxes	$0.43	$0.44	$0.45	$0.47	$0.39	
Sales/Use Tax	$30.85	$32.44	$34.10	$35.85	$26.51	
Lottery	$1.93	$1.95	$1.98	$2.00	$1.85	
Compact Revenues	$0.11	$0.12	$0.12	$0.12	$0.11	
All other Revenues	$50.85	$52.53	$54.26	$56.05	$46.30	

Source: Spectrum Gaming Group, Regional Economic Models Inc.

A. Scenario A: Seminole Banked Card Game Exclusivity

The salient assumption under this scenario is that the Florida casino landscape reflects current law/current administration, while the banked card provisions of the Seminole Compact are renewed for an additional 15 years and the Compact is not otherwise amended.

1. Implications and Considerations

It is our understanding that if this scenario were implemented, the revenue sharing agreement in place (per the Seminole Compact) would continue.

This scenario would effectively extend the status quo and as such would not address economic concerns expressed by pari-mutuel operators outside of Broward and Miami-Dade counties with respect to their ability/desire to have gaming operations. The recent opening of slots at Hialeah Park and assumed 2014 opening of slots at Dania Jai-Alai will heighten the competitive pressures in the South Florida market, leading to possible capital constraints and diminished marketing in the face of the Seminole gaming operations.

2. GGR and Related Projections

Under this scenario, we project the eight pari-mutuels with slot machines would generate $607.8 million of gross slot revenue, with net slot revenue of $547 million. This level of revenue would result in revenue due to the State as follows:

- $191.4 million under the current 35 percent rate of net slot revenue.
- $147.7 million at the US median effective GGR tax rate of 27 percent.
- $295.4 million at the effective rate(s) in Pennsylvania (i.e., Pennsylvania's slot and table rates to Florida's slot and table GGR, respectively).[29]

We estimate the eight Native American casinos would have $2.06 billion of combined slot and table games revenue. Therefore, we estimate GGR from Florida's 16 casinos would be $2.67 billion.[30] A summary of this scenario is in the following table:

[29] See Chapter II(N)(2) below for detail on the Pennsylvania tax model.

[30] As noted at the beginning of Chapter III, all GGR projections in each of the scenarios are in current dollars and, as applicable, the projections and resultant fiscal impacts will be adjusted for future years based upon REMI's forecasted inflationary growth, as well as with respect to changes in adult population.

Figure 11: Scenario A – renewing Seminole Compact, landscape and projections

Florida Casinos	Current Law/ Current Administration - Banked Card provision of Seminole Compact renewed				Compared to Baseline	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	$ Var.	% Var.
# Locations	8	8	0	16	0	0.0%
# Counties	2	6	0	6	0	0.0%
# Slots	8,409	14,564	0	22,973	0	0.0%
# Table Games	0	344	0	344	344	n/a
# Gaming Positions	8,409	16,628	0	25,037	2,064	9.0%
GGR ($M)	$607.8	$2,062.2	$0.0	$2,670.0	$214.3	8.7%
GGR / Position / Day	$198	$340	$0	$292	($1)	-0.2%

Source: Spectrum Gaming Group

Additionally, we project the statewide casino participation rate would be 23.1 percent; the rate for adults residing within a one-hour drive of a casino would be 32 percent and the rate would be 11.8 percent beyond a one-hour drive.

3. Economic/Fiscal Impacts

Next, we determine the economic impacts of Scenario A. This scenario does not include construction and does include Compact revenues. The results are presented as annual differences relative to the baseline scenario.

A key point about Scenario A is that it is the same as the baseline until the expiration of banked card game exclusivity which explains the zero values for Year 1. The annual results are presented below. The average of the entire analysis period is also presented which gives a better picture of the ongoing effect than the values of any one year. Over the course of the simulation, the average employment is 1,697 jobs and Gross State Product is $172 million. Total state revenues increase an average of $40.6 million under the Default Budget.

Figure 12: Scenario A – renewal of Seminole Compact – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	0	1,937	1,813	1,697	1,604	1,525
Gross State Product	$0	$176	$174	$172	$171	$171
Gaming Taxes	$0.00	($0.16)	($0.33)	($0.39)	($0.43)	($0.48)
Sales/Use Tax	$0.00	$1.16	$2.40	$2.51	$2.59	$2.66
Lottery	$0.00	($1.68)	($3.31)	($3.33)	($3.33)	($3.34)
Compact Revenues	$0.00	$20.60	$42.18	$43.87	$45.29	$46.75
All other Revenues	$0.00	$0.62	$1.37	$1.60	$1.75	$1.85

At Default Budget	Year 7	Year 8	Year 9	Year 10	Average
Employment	1,470	1,429	1,402	1,390	1,697
Gross State Product	$172	$175	$178	$181	$172
Gaming Taxes	($0.51)	($0.54)	($0.57)	($0.59)	($0.39)
Sales/Use Tax	$2.73	$2.81	$2.92	$3.02	$2.51
Lottery	($3.35)	($3.36)	($3.37)	($3.36)	($3.33)
Compact Revenues	$48.20	$49.64	$51.07	$52.48	$43.87
All other Revenues	$1.91	$1.98	$2.04	$2.08	$1.60

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

4. GGR and Related Projections (with Option to End Pari-Mutuel Live Events)

In this sub-scenario, pari-mutuel facilities would be permitted to end live performances, with supplementation of horse purses and awards calculated as percentage of statewide GGR, rather than by facility.

GGR projections (to determine fiscal impacts) for this scenario mimic our projections per Scenario A. However, in addition to aforementioned revenue-due-to-the-State figures, we project $31.2 million would need to be generated for horse purse subsidies. Applying a uniform rate applicable to total GGR at all casinos in Florida (net of Native American operations), the incremental rate to generate such purse subsidies would be 5.13 percent under this scenario; however, this rate would be 5.7 percent based on taxable GGR.

5. Economic/Fiscal Impacts (with Option to End Pari-Mutuel Live Events)

Next, we determine the economic impacts of this scenario using the REMI Tax-PI model, using the Default Budget. (See Chapter I[H] for methodology detail.) This scenario does not include any construction and does include Compact revenue. Over the course of the simulation, the average employment is 1,246 jobs and Gross State Product is $163 million. Total state revenues average $39.4 million under the Default Budget.

Figure 13: Scenario A-1 – renewal of Seminole Compact and reduction in pari-mutuel events – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	-473	1,468	1,351	1,246	1,160	1,085
Gross State Product	($9)	$166	$165	$163	$162	$162
Gaming Taxes	($0.03)	($0.21)	($0.39)	($0.44)	($0.49)	($0.53)
Sales/Use Tax	($0.23)	$0.66	$1.84	$1.90	$1.94	$1.97
Lottery	($0.02)	($1.72)	($3.35)	($3.35)	($3.35)	($3.35)
Compact Revenues	$0.00	$20.60	$42.18	$43.87	$45.29	$46.75
All other Revenues	($0.07)	$0.41	$1.07	$1.23	$1.32	$1.37
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	1,035	996	973	960	1,246	
Gross State Product	$164	$167	$169	$173	$163	
Gaming Taxes	($0.56)	($0.60)	($0.62)	($0.65)	($0.44)	
Sales/Use Tax	$2.00	$2.05	$2.10	$2.16	$1.90	
Lottery	($3.37)	($3.38)	($3.38)	($3.37)	($3.35)	
Compact Revenues	$48.20	$49.64	$51.07	$52.48	$43.87	
All other Revenues	$1.40	$1.43	$1.46	$1.49	$1.23	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Under this scenario, we believe it is reasonable to expect net direct employment of 12,465 FTEs.

B. Scenario B: Seminole Table Games Exclusivity

The salient assumption under this scenario is that the Florida casino landscape reflects current law/current administration, with the same exceptions and exclusions described in Scenario A above, as well as with the addition of table games that may include roulette and craps at five Seminole casinos (excluding Brighton and Big Cypress). We assume these table games would be incrementally added to the existing casino supply, and we model/allocate the number and types of games according to the table games allocation data for the largest Las Vegas Strip casino operators as of the last 12 months ended May 2013.

The largest Las Vegas Strip casinos (23 in total) had 2,109 table games in operation, while 383 (18.2 percent) were roulette and craps games. Florida's five relevant Native American casinos had 344 table games in operation as of June 30, 2013.[31] Applying the aforementioned ratio from Nevada to Florida's Native American casinos (and assuming a static/current level of 344 table

[31] Based on information received from the Seminole Tribe of Florida.

games, net of roulette and craps) would mean Florida's Native American casinos would add 74 other table games, such as roulette and craps, thereby increasing total table games counts to 418.

Under this scenario, we estimate there will be 22,973 slot machines and 418 table games (and 25,481 gaming positions) at 16 casinos throughout Florida. Assuming existing casinos do not add or subtract gaming positions from their counts as of June 30, 2013, under this scenario, Broward and Miami-Dade counties would have 69.5 percent of the total statewide gaming positions and Hillsborough County would have 23.1 percent. There would still be six counties in Florida with at least one casino.

1. Implications and Considerations

It is our understanding that if this scenario were implemented, the revenue-sharing agreement with the Seminole Tribe would be renegotiated. As such, this scenario would provide the Seminole Tribe with greater, potential economic benefit, which could in-turn yield greater revenue sharing, all other things being equal.

As our projections in this scenario indicate, granting table-games exclusivity to the Seminole casinos – with the addition of craps and roulette games – would result in additional revenue and, presumably, profit for the Seminole Tribe. The State of Florida may want to consider whether a more substantial revenue-sharing agreement is warranted for this privilege.

Granting the Seminole Tribe table games exclusivity could widen the revenue gap between the Seminole casinos and the pari-mutuel casinos, creating deterioration of operating performance for the pari-mutuels. This could result in declining revenue and financial performance for the pari-mutuel operators, leading to lower capital reinvestment and less-attractive facilities, possibly leading to an overall negative impact for the State.

2. GGR and Related Projections

Under this scenario, we project the eight pari-mutuels with slot machines would generate $607.8 million of gross slot revenue, with net slot revenue of $547 million. This level of revenue would result in revenue due to the State as follows:

- $191.4 million under the current 35 percent rate of net slot revenue.
- $147.7 million at the US median effective GGR tax rate of 27 percent.
- $295.4 million at the effective rate(s) in Pennsylvania.

We estimate the eight Native American casinos would have $2.117 billion of combined slot and table games revenue. Therefore, we estimate GGR from Florida's 16 casinos would be $2.725 billion.

We project the addition of 74 table games (i.e., those currently not permitted, but which may include roulette and craps games) to five Seminole casinos would increase statewide annual

GGR by $269.3 million (from what would otherwise occur – under Baseline scenario). A summary of this scenario is in the following table:

Figure 14: Scenario B – Seminole addition of craps/roulette games, landscape and projections

Florida Casinos	Granting Seminole Tribe exclusive authorization to offer Class III table games				*Compared to Baseline*	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	*$ Var.*	*% Var.*
# Locations	8	8	0	16	*0*	*0.0%*
# Counties	2	6	0	6	*0*	*0.0%*
# Slots	8,409	14,564	0	22,973	*0*	*0.0%*
# Table Games	0	418	0	418	*418*	*n/a*
# Gaming Positions	8,409	17,072	0	25,481	*2,508*	*10.9%*
GGR ($M)	$607.8	$2,117.3	$0.0	$2,725.1	*$269.3*	*11.0%*
GGR / Position / Day	$198	$340	$0	$293	*$0*	*0.0%*

Source: Spectrum Gaming Group

Additionally, we project the statewide casino participation rate (i.e., Florida adults visiting Florida casinos) would be 23.1 percent, while this rate for adults residing within a one-hour drive of a casino would be 32 percent and the rate would be 11.8 percent for those living beyond a one-hour drive of a casino.

3. Economic/Fiscal Impacts

Next, we determine the economic impacts of these scenarios using the REMI Tax-PI model, using the Default Budget and three different tax rates (see Chapter II[H] for methodology detail). This scenario does not include construction and does include Compact revenues. The results are presented as annual differences relative to the baseline scenario.

From Year 1 onward, Scenario B shows a gradual increase in employment without the initial spike in jobs caused by large-scale construction projects. Over the course of the simulation, the average employment is 1,982 jobs and Gross State Product is $210 million under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of $50.9 million under the Default Budget to $53.6 million under the pari-mutuel tax rates model.

Figure 15: Scenario B – Seminole table game exclusivity – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	2,560	2,303	2,125	1,982	1,873	1,788
Gross State Product	$78	$217	$213	$210	$209	$210
Gaming Taxes	$0.05	($0.06)	($0.26)	($0.32)	($0.38)	($0.42)
Sales/Use Tax	$1.36	$2.90	$3.11	$3.15	$3.20	$3.25
Lottery	($0.24)	($2.33)	($4.10)	($4.11)	($4.11)	($4.11)
Compact Revenues	$4.39	$29.50	$51.37	$53.35	$55.08	$56.85
All other Revenues	$0.40	$1.44	$2.15	$2.29	$2.39	$2.44
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	1,731	1,691	1,668	1,659	1,982	
Gross State Product	$211	$216	$220	$225	$210	
Gaming Taxes	($0.46)	($0.50)	($0.53)	($0.56)	($0.32)	
Sales/Use Tax	$3.32	$3.42	$3.54	$3.68	$3.15	
Lottery	($4.13)	($4.14)	($4.14)	($4.13)	($4.11)	
Compact Revenues	$58.62	$60.37	$62.10	$63.83	$53.35	
All other Revenues	$2.49	$2.54	$2.59	$2.65	$2.29	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 16: Scenario B – Seminole table game exclusivity – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	2,560	2,327	2,156	2,018	1,902	1,821
Gross State Product	$78	$219	$215	$212	$212	$212
Gaming Taxes	$0.18	$0.97	$1.60	$1.60	$1.62	$1.64
Sales/Use Tax	$1.36	$2.91	$3.15	$3.20	$3.25	$3.31
Lottery	($0.24)	($2.32)	($4.10)	($4.10)	($4.10)	($4.11)
Compact Revenues	$4.39	$29.50	$51.37	$53.35	$55.08	$56.85
All other Revenues	$0.40	$1.45	$2.17	$2.33	$2.43	$2.48
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	1,764	1,727	1,700	1,688	2,018	
Gross State Product	$215	$218	$222	$228	$212	
Gaming Taxes	$1.66	$1.69	$1.72	$1.75	$1.60	
Sales/Use Tax	$3.38	$3.49	$3.61	$3.74	$3.20	
Lottery	($4.12)	($4.13)	($4.13)	($4.12)	($4.10)	
Compact Revenues	$58.62	$60.37	$62.10	$63.83	$53.35	
All other Revenues	$2.52	$2.58	$2.63	$2.69	$2.33	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 17: Scenario B – Seminole table game exclusivity – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	2,559	2,321	2,148	2,014	1,903	1,821
Gross State Product	$78	$219	$215	$212	$211	$212
Gaming Taxes	$0.14	$0.75	$1.23	$1.23	$1.24	$1.25
Sales/Use Tax	$1.36	$2.91	$3.14	$3.20	$3.25	$3.30
Lottery	($0.24)	($2.32)	($4.10)	($4.10)	($4.10)	($4.11)
Compact Revenues	$4.39	$29.50	$51.37	$53.35	$55.08	$56.85
All other Revenues	$0.40	$1.44	$2.17	$2.33	$2.43	$2.49
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	1,761	1,722	1,699	1,689	2,014	
Gross State Product	$214	$217	$223	$229	$212	
Gaming Taxes	$1.27	$1.29	$1.31	$1.34	$1.23	
Sales/Use Tax	$3.39	$3.49	$3.62	$3.75	$3.20	
Lottery	($4.12)	($4.13)	($4.14)	($4.13)	($4.10)	
Compact Revenues	$58.62	$60.37	$62.10	$63.83	$53.35	
All other Revenues	$2.54	$2.60	$2.67	$2.73	$2.33	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 18: Scenario B – Seminole table game exclusivity – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	2,558	2,336	2,176	2,036	1,927	1,845
Gross State Product	$78	$220	$217	$215	$214	$214
Gaming Taxes	$0.27	$1.51	$2.48	$2.50	$2.52	$2.55
Sales/Use Tax	$1.36	$2.92	$3.17	$3.24	$3.29	$3.35
Lottery	($0.24)	($2.32)	($4.10)	($4.10)	($4.10)	($4.10)
Compact Revenues	$4.39	$29.50	$51.37	$53.35	$55.08	$56.85
All other Revenues	$0.40	$1.46	$2.19	$2.36	$2.47	$2.54
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	1,788	1,748	1,725	1,711	2,036	
Gross State Product	$216	$221	$225	$231	$215	
Gaming Taxes	$2.59	$2.64	$2.68	$2.73	$2.50	
Sales/Use Tax	$3.44	$3.55	$3.68	$3.82	$3.24	
Lottery	($4.12)	($4.13)	($4.13)	($4.12)	($4.10)	
Compact Revenues	$58.62	$60.37	$62.10	$63.83	$53.35	
All other Revenues	$2.60	$2.66	$2.73	$2.79	$2.36	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

4. GGR and Related Projections (with Open to End Pari-Mutuel Live Events)

In this sub-scenario, pari-mutuel facilities would be permitted to end live performances, with supplementation of horse purses and awards calculated as percentage of statewide GGR, rather than by facility.

GGR projections (to determine fiscal impacts) for this scenario mimic our projections per Scenario B. However, in addition to aforementioned revenue-due-to-the-State figures, we project $31.2 million would need to be generated for purse subsidies. Applying a uniform rate applicable to total GGR at all casinos in Florida (net of Native American operations), the rate to generate such purse subsidies would be 5.13 percent under this scenario; however, this rate would be 5.7 percent based on taxable GGR.

5. Economic/Fiscal Impacts (with Option to End Pari-Mutuel Live Events)

Next, we determine the economic impacts of this scenario using the REMI Tax-PI model, using the Default Budget. (See Chapter I[H] for methodology detail.) This combination scenario captures the effects of a reduction in live racing in addition to the changes introduced in Scenario B. This scenario does not include a construction component does include Compact revenues. Over the course of the simulation, the average employment is 1,530 and Gross State Product is $201 million. Total state revenues average of $49.8 million under the Default Budget.

Figure 19: Scenario B-1 – Seminole Tribe has table games exclusivity and reduction in pari-mutuel events – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	2,085	1,834	1,662	1,530	1,429	1,349
Gross State Product	$69	$208	$204	$201	$200	$201
Gaming Taxes	$0.02	($0.12)	($0.31)	($0.38)	($0.43)	($0.48)
Sales/Use Tax	$1.13	$2.40	$2.55	$2.55	$2.55	$2.56
Lottery	($0.26)	($2.36)	($4.13)	($4.14)	($4.13)	($4.13)
Compact Revenues	$4.39	$29.50	$51.37	$53.35	$55.08	$56.85
All other Revenues	$0.33	$1.24	$1.85	$1.92	$1.96	$1.97
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	1,296	1,259	1,238	1,231	1,530	
Gross State Product	$203	$207	$211	$217	$201	
Gaming Taxes	($0.52)	($0.55)	($0.58)	($0.61)	($0.38)	
Sales/Use Tax	$2.59	$2.65	$2.72	$2.82	$2.55	
Lottery	($4.14)	($4.15)	($4.16)	($4.14)	($4.14)	
Compact Revenues	$58.62	$60.37	$62.10	$63.83	$53.35	
All other Revenues	$1.98	$2.00	$2.02	$2.06	$1.92	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Under this scenario, we believe it is reasonable to expect net direct employment of 12,836 FTEs.

C. Scenario C: Gaming in Non-Casinos

Gambling in non-casinos such as Internet/sweepstakes cafes, adult arcades, truck stops, and other locations with electronic gaming devices of questionable legal standing – commonly referred to as "gray market" gambling – was effectively shut down on April 10, 2013, when Governor Rick Scott signed HB 155. This bill gave law enforcement the tools necessary to enforce existing prohibitions of these types of gambling.

The law became effective after the Legislature commissioned this three-part gaming study being conducted by Spectrum. Accordingly, and as a result of discussion with Legislative staff, Spectrum will not be analyzing the economic impacts if these forms of gambling were to be regulated or restricted. Rather, we are providing a discussion regarding the size and economic ramifications of closure of these casino-style gambling locations.

Illegal gambling is impossible to accurately quantify because there are no public records. Illegal gambling nationwide may generate as much as $150 billion annually, according to Havocscope, a website that attempts to quantify illegal gambling.[32] A 2011 *Bloomberg Businessweek* article estimated at the time that there were 3,000 to 5,000 Internet cafes operating nationwide, generating $10 billion to $15 billion dollars in annual revenue.[33] *Bloomberg Businessweek* estimated the nationwide revenue from Internet cafes through interviews with current equipment suppliers, finding that a single terminal in a successful location generates between $1,000 and $5,000 per month in gross revenue. Using this information, the author extrapolated that a moderately sized establishment offering 100 machines could therefore gross around $250,000 per month, or $3 million annually.[34] All of which would suggest that in less than a decade, Internet cafes in the United States have grown into a collective $10 billion to $15 billion industry.

The Florida League of Cities estimated at the time of the HB 155 passage that there were 1,000 Internet cafes operating throughout the state and potentially producing $1 billion in annual

[32] Havocscope, "Illicit Trade Value: United States"; http://www.havocscope.com/tag/united-states/.

[33] Felix Gillette, "The Casino Next Door," *Bloomberg Businessweek*, April 11, 2011; http://www.businessweek.com/magazine/content/11_18/b4226076180073.htm

[34] Ibid.

revenue.[35] This figure may have come from a 2011 *New York Times* story,[36] which has been widely cited in the discussion of the state's Internet cafes.

A white paper commissioned by the American Gaming Association, produced in opposition to Internet cafes, included a transactional analysis of an Internet sweepstakes cafe in Palm Harbor, FL.[37] The analysis documented that over a six-week period, from June 1 to July 15, 2012, on 171 out of a total of 640 customer visits, customers purchased at least $100 worth of Internet access, which, priced at 3 cents per minute would translate into more than 55 hours of access time. Customers received sweepstakes entries for time purchased. Additionally during the six-week period, 12 of those customers purchased more than $1,000 of access time, or a total of 550 hours of access, and one customer purchased more than 231,000 minutes, or a total of 4,000 hours.[38] Clearly, Internet sweepstakes are the primary driver of this business model.

Revenue generated by Internet cafes prior to the ban was not subject to any gaming tax, nor were the operations governed by any state or local regulatory regime. Internet cafes did, however, generate sales taxes, corporate taxes and employment taxes and, thus, exerted a previously unquantified effect on the Florida economy. Corporate taxes were minimized by some Internet cafe operations by filing as a nonprofit enterprise, as widely reported in the Allied Veterans of the World situation, but even charitable organizations are required to file a Florida corporate tax return and pay the Florida corporate tax at a rate of 5.5 percent.[39]

The passage of HB 155 also affected slot-style gambling at roughly 200 adult arcades throughout the state. The new legislation clarified that arcade devices must be coin-operated "games of skill" that cannot award more than $0.75 in winnings per play.[40] Further, it clarified that

[35] "Florida Internet Cafes, "Legislative Indecision Requires Local Governments to Make Tough Choices," *Florida League of Cities*; http://www.floridaleagueofcities.com/Assets/Files/Pre-emptionThreatsInternetCafeDRussell.pdf .

[36] Don Van Natta, "Worries about 'Convenience Casinos' in Florida," *New York Times*, May 6, 2011; http://www.nytimes.com/2011/05/07/us/07sweepstakes.html?pagewanted=all&_r=0.

[37] David O. Stewart, Ropes & Gray, L.L.C., *Internet Sweepstakes Cafes: Unregulated Storefront Gambling in the Neighborhood,* American Gaming Association; http://www.wral.com/asset/news/state/nccapitol/2012/10/12/11652958/internet_sweepstakes_white_paper_final.pdf .

[38] Ibid.

[39] The Florida Senate, *Review Internet Cafes Used for Electronic Game Promotions, Interim Report, 2012-137*, October 2011; http://www.flsenate.gov/PublishedContent/Session/2012/InterimReports/2012-137ri.pdf.

[40] Kathleen Haughney, "Gov. Rick Scott signs bill banning Internet cafes," *Orlando Sentinel*, April 10, 2013; http://articles.orlandosentinel.com/2013-04-10/news/os-scott-signs-internet-cafe-ban-20130410_1_florida-arcade-association-group-allied-veterans-gale-fontaine.

arcade operators may not offer gift cards as prizes or promotional incentives.[41] These restrictions on the use of cash or credit cards and the limitation on prizes and payouts have effectively shut down numerous adult arcades in Florida. While most adult arcades are not as dependent upon gambling devices to the extent Internet cafes are, the passage of the legislation has caused many arcades to close, with the subsequent loss of jobs and related sales and employment tax revenues. Gale Fontaine, President of the Florida Arcade and Bingo Association, told Spectrum that each arcade before HB 155 passed had, on average, 10 employees – six of whom were full-time. She estimated that as few as 50 adult arcades are operating today, down from 200 before the bill passed. Those still operating are generating only a small fraction of the revenue they were beforehand, Fontaine said. She noted that some of the arcades that closed are planning to reopen.

Also affected by the legislation are "maquinitas," video gaming machines similar to arcade slots, as well as Internet cafe terminals, found in small corner convenience stores primarily in Miami-Dade County, and slot-like devices in gas stations, truck stops, convenience stores, restaurants and bars throughout the state. Miami Police Chief Manuel Orosa estimated that there were more than 1,000 maquinitas operating in the city prior to passage of HB 155.[42] A 2011 report estimated there were 1,500 maquinitas in the city, perhaps generating $78 million per year in gaming revenue.[43]

The data for these forms of gray-market gambling in Florida – Internet cafes, adult arcades and maquinitas – cannot support credible analysis because they are anecdotal; reliable data do not exist. Accordingly, Spectrum cannot provide credible projections as to the size and economic impacts of gray-market gambling.

The closure of gray-market gambling locations and devices statewide certainly caused the immediate elimination of a significant number of jobs in Florida. The reallocation of the gray-market gambling dollars to other, legal forms of gambling – or to other areas of discretionary spending – may result in increased employment at the businesses that benefit from the newfound dollars, but the extent of the employment impact cannot be credibly projected.

We do note that the Florida Lottery appears to be benefiting from the crackdown on gray-market gambling. Dennis Harmon said at a state revenue-estimating conference in July 2013 that

[41] Laura Layden, "Lawsuit seeks to reopen Florida senior arcades, but not Internet cafes," *Naples Daily News*, April 20, 2013; http://www.naplesnews.com/news/2013/apr/20/lawsuit-reopen-florida-senior-arcades-cafe-fla/.

[42] Charles Rabin, "Miami Police Make Arrests and Seize 'Maquinitas' as Mayor Does About-Face," *The Miami Herald*, April 18, 2013; http://www.miamiherald.com/2013/04/18/3352109/miami-police-make-arrests-and.html.

[43] Kirk Nielsen, "Quality of Vice: Voters may not have known it, but gambling, both legal and illegal, was a big part of the recent mayoral election," Poder360, July 2011; http://www.poder360.com/article_detail.php?id_article=5812.

the Lottery is already seeing an increase in sales of scratch-off product.[44] "We have an impression by our people that it has helped the scratch-off games," Harmon said. He later mentioned similar increases in the Cash 3, Play 4 and Fantasy 5 games in his remarks.[45] Harmon went on to tell *The Tampa Tribune*, "I wouldn't call this a loose correlation. We see some evidence of a modest, positive impact from (the ban) on those games, but we have not yet quantified it." Harmon further explained that Florida Lottery preliminary results show a $66 million increase in actual sales compared to sales projections for scratch-off games and a $10.3 million rise in results for Cash 3, Play 4 and Fantasy 5 in the short period between the passage of the HB 155 on April 10, 2013, and the end of the fiscal year on June 30, 2013.[46]

D. Scenario D: Modifying or Repealing Live Racing Requirements

Florida's pari-mutuel landscape would look much different if pari-mutuel operators were not required to offer live performances as a condition of operating a cardroom or slot machines, or both. Simply put, the ability to "decouple" racing from gaming would result in a lot less greyhound racing and a lot less jai alai.

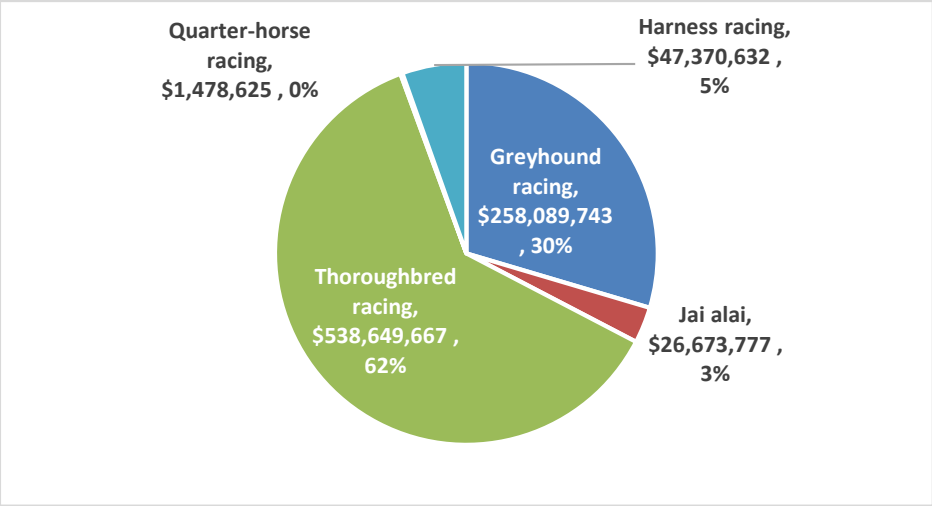
In FY 2013, 13 greyhound tracks, six horse racing tracks and six jai alai frontons conducted live pari-mutuel events. We believe that a decoupling law would result in the closure of six of the 13 greyhound tracks, three of the six jai alai frontons, and a quarter-horse track that offered barrel racing. And of those facilities that would continue to operate, some would offer far fewer races or games than they do now.

[44] James L. Rosica, "Official: Internet cafe ban boosts Lottery sales," *The Tampa Tribune*, July 15, 2013; http://tbo.com/news/politics/official-internet-cafe-ban-boosts-lottery-sales-20130715/.

[45] Ibid.

[46] Ibid.

Figure 20: Florida total pari-mutuel handle by sector, FY 2013



Source: Florida Division of Pari-Mutuel Wagering

We acknowledge that our estimates of the impact of a decoupling law are speculative. They are based on conversations with various stakeholders as well as an online survey that Spectrum asked pari-mutuel operators to complete in July-August 2013. The decisions of operators will be largely based on the type of decoupling law that would be passed. For the purposes of our analysis, Spectrum assumed that a decoupling law would not negatively impact operators that chose to cease live racing. We assumed that their decision to cease live racing/games would not result in their having to shut down their cardrooms and casinos.

The following three pari-mutuel operators declined to participate in our survey: Sanford Orlando Kennel Club, Dania Jai-Alai, and Casino Miami Jai-Alai/Fort Pierce Jai-Alai (owned by the same company). Calder declined to formally answer survey questions, but officials answered questions relating to it. We assumed that all of those facilities would continue to operate but would reduce performances.

Participants were asked, among other things:

- Would they stop offering live pari-mutuel events as soon as possible?
- Would they continue to operate indefinitely?
- Would they reduce their performances?

Our estimates may be understated because some of the pari-mutuel operators we spoke with said they would not publicly answer our survey questions because of the potential or likely political fallout from speaking honestly. Privately, they told us that the pari-mutuel laws need to be rewritten to take into account the fact that horse racing, greyhound racing and jai alai are not as popular as they once were. Forcing operators to conduct their business models based on an environment that existed 20 or 30 years ago makes no sense, they argue, noting that it costs them millions of dollars every year to operate under such a policy. On the other hand, horsemen and breeders make the case that without the pari-mutuel activity, cardrooms and casinos would not

exist and that if changes are to be made regarding the live-racing requirement, they need to be submitted to the voters for their consideration. Anything less, they argue, would violate the public trust.

a. Jai Alai Impact

The three jai alai frontons that we believe would close are Hamilton, Ocala and Orlando, which in FY 2012 accounted for 18 percent of all jai alai performances but just 4 percent of total jai alai handle and 8 percent of player awards. Jai alai, as a sector, generated just $378,000 in State revenue, which amounted to 2.7 percent of overall State revenue collected from the pari-mutuel sector.[47] Fort Pierce generated $16,800 in FY 2012 tax revenue; Hamilton $7,680; Ocala $38,000; and Orlando $49,440.[48] Officials from Florida's Division of Pari-Mutuel Wagering (PMW) could not provide any estimates of regulatory costs by sector, let alone by facility. But it appears that the numbers cited above are so low that they suggest that other sources of revenue may be required to fund the regulatory costs of overseeing them.

Hamilton and Ocala officials indicated that their facilities would no longer offer live games. Orlando officials said they are uncertain as to what they would do but would cut performances by 75 percent if they did continue to offer jai alai games. Our belief is that Orlando would close within three years if a decoupling law were passed. Fort Pierce and Miami Jai-Alai frontons lost nearly $12 million in FY 2012 on their pari-mutuel operation, according to financial reports they submitted to the State. Dania Jai-Alai lost $1.7 million. The auditor for Fort Pierce-Miami stated that the losses were so severe that he had questions whether the entity could stay in business.[49] Fort Pierce, Miami and Dania accounted for 82 percent of the 803 jai alai performances in FY 2012.[50] We believe that if decoupling were to occur, Fort Pierce, Miami and Dania Jai-Alai would either stop offering jai alai or would reduce performances.

As we indicated, the facilities we would expect to close accounted for very little of player awards. Hamilton paid out less than $24,000 in FY 2012. Unlike other sectors, we do not see the other jai alai frontons recapturing those player awards. We believe that the downward trend in player awards will continue.

b. Thoroughbred Impact

All three thoroughbred operators said they would continue to offer live racing if a decoupling bill were passed, and Calder and Gulfstream indicated they would not expect to reduce

[47] Florida PMW, Annual Report, FY 2012.

[48] Ibid.

[49] FY 2012 Annual Financial Report submitted to PMW.

[50] Florida PMW, Annual Report, FY 2012.

performances. Tampa Bay Downs officials say they, too, would continue to offer live racing and that performances would be reduced only if track officials have difficulty obtaining horses, which is a possibility because Tampa Bay is the only Florida thoroughbred track without slot revenue to supplement its purses. It is struggling to attract top-tier horses because its purses are not competitive with those offered at Calder and Gulfstream, which do receive supplements from slot revenue.

We note that the horsemen and breeders we interviewed were troubled over the prospect of a decoupling bill becoming law. Despite the claims of thoroughbred operators, they believe that within five years, there would be a significant reduction in the amount of thoroughbred racing, which they say would have a devastating impact on horse farms and breeding operations in the state. One exception, they said, would be Gulfstream, which appears to be looking to race year-round.

There is no indication that purses, at least in the near future, would decline in a decoupling environment. We note that they have increased 27 percent, from $63.8 million in FY 2010 to $81.1 million in FY 2012. And with increased performances from Gulfstream, we would expect that trend to continue. Operators are already offering performances far in excess of what the State statute requires. Therefore, we see decoupling, at least in the near future, having little impact on thoroughbred purses, as operators insist they plan on expanding racing activity regardless of what the Legislature does. In short, we do not see any track closures or even reductions in performances on a statewide level.

c. Harness Impact

In the harness racing sector, there is only one track: Isle Casino Racing at Pompano Park. Isle officials say they would continue to offer live racing but would reduce performances by 25 percent from 140. Despite the presence of a casino, purses have fallen from $9.5 million in FY 2006 (the last full fiscal year that Pompano did not have a casino) to $7.4 million in FY 2012, a decline of 22 percent.[51]

We would expect the purse decline to continue if decoupling were to become law. The operator said it is sustaining a multimillion-dollar loss each year, and can be expected to reduce purses even further if it could do so. We would expect purses to fall by as much as 50 percent, to $3.7 million.

Joseph Pennacchio, president of the Florida Standardbred Breeders and Owners Association, said he believes that Isle would cease live racing if it could, and would do so as soon as possible. One of the reasons for the sharp decline in handle and purses at Pompano, according to Pennacchio, is because the operator has failed to maintain the facility. Spectrum toured the facility earlier this year and found it to be in a state of disrepair (in contrast to the well-maintained

[51] Florida PMW, Annual Report, FY 2012.

adjacent casino). The operator has indicated in an interview with Spectrum that it may close the grandstand in the fall, which would prevent patrons from watching races at the finish line. Ceasing live operations would destroy the standardbred breeding business, which also would adversely affect small horse farms throughout the state, Pennacchio said. Breeding activity already has seen much less activity as a result of purse declines, he noted.

d. Greyhound Impact

Much of the overall pari-mutuel contraction from decoupling would occur in the greyhound sector. Our estimate is that performances would decline by nearly 40 percent. We base that reduction on the closure of the six greyhound tracks and a reduction as well in performances at three other tracks. We would expect that there would be little, if any, recapture of those performances at the five tracks that continue to operate, as most of them are already running year-round.

The six greyhound facilities that Spectrum believes would cease to offer live racing are: Jefferson County Kennel Club, Melbourne Greyhound Park, Pensacola Greyhound Track, Sarasota Kennel Club, Ebro Greyhound Park and Mardi Gras Racetrack and Gaming Center.

In FY 2012 (the latest year for which these data are available), those six tracks accounted for 30 percent of greyhound performances, 17 percent of purses paid, and 15 percent of state taxes collected.[52] In FY 2013, they accounted for 12 percent of total regular handle, 12 percent of on-track live handle, and 9 percent of inter-track wagering.[53]

Jefferson County, Melbourne and Pensacola would cease live racing, track officials told Spectrum in our survey and in telephone interviews. The three tracks lost more than $4 million in FY 2012 from their pari-mutuel operations, according to "uniform" financial reports submitted to PMW. They generated no inter-track wagering revenue as their racing product was not attractive enough for their signal to be carried by other Florida tracks.[54]

Jefferson County already has stopped offering live racing, claiming it can no longer afford to operate in the current regulatory environment. Track officials say the State wants them to replace existing kennels, which animal rights activists say are inhumane. The track claims it is too expensive to replace the kennels. The track has, however, obtained a license to conduct live racing next year but does not plan on doing so unless the State changes its position on the kennels. By

[52] Spectrum analysis of PMW Annual Report FY 2012.

[53] PMW year-to-date activity report through June 2013, http://www.myfloridalicense.com/dbpr/pmw/documents/Stats/HandleandCardroom2012-2013--2013-08-05--June--YTD.pdf.

[54] Spectrum analysis of PMW Annual Report FY 2012.

obtaining race dates for next year, Jefferson is keeping its options open in the event it is allowed to operate slot machines.[55]

Ebro Greyhound Park, Mardi Gras Racetrack and Sarasota Kennel Club are unsure of what they might do should a decoupling bill pass. Their decision would, in part, be based on the type of decoupling legislation that is passed.

Would those facilities, for example, be able to continue to receive tax credits against tax on handle and sell them as they have in the past? How would the new law impact their simulcast and inter-track wagering operations? Would they have to pay more to the Florida host facility to receive races/games? What happens to the 4 percent levy on cardroom receipts that is currently used to boost purses? Would they continue to pay that 4 percent levy? Would that money be used to boost purses at the tracks that offer live racing? These are all policy decisions that the Legislature would need to address, and they will undoubtedly influence decoupling decisions of greyhound operators.

But it is our belief that Ebro, Mardi Gras and Sarasota would, in fact, cease live racing within three years. Should Mardi Gras not close, it would significantly reduce its live racing performances.

Three other greyhound tracks would stay open but reduce performances: Flagler by 33 percent, Naples by 50 percent, and Daytona by 10 percent.

Thus, the number of greyhound tracks that would either close or reduce performances would total nine. They accounted for 25 percent, or $6.6 million of the $26.4 million, in total purses paid in FY 2012. Some of those purses would be recaptured by the tracks that continue to operate. For example, track operators at Flagler and Naples-Fort Myers would be in a position to increase their average daily purses due to running fewer performances. And tracks such as Orange Park and Palm Beach Kennel Club could see an increase in simulcast wagering and inter-track wagering as well. Some of those increases should find their way into purse accounts. Those tracks still operating should see an increase in purses but, statewide, our estimate is that purses would decline by about 20 percent in the year after decoupling. This accounts for a recapture rate of 50 percent, which means that one-half of the lost purses, $3.6 million, from the closures and performance reductions would be recovered at existing tracks.[56]

The nine tracks accounted for 18 percent of total regular handle in FY 2012. Again, there would be a recapture rate for some of that lost handle. We assume a handle recapture rate of 50 percent.[57]

[55] Interview with Spectrum of Jefferson County Kennel Club management.

[56] Spectrum analysis of purses figures from PMW.

[57] Spectrum analysis of handle figures from PMW.

The nine tracks accounted for 37 percent of performances. There would be little, if any, pickup of those lost performances by the tracks that would continue to operate, according to Spectrum research, as many of them are already operating year-round

Three top-tier greyhound tracks – Palm Beach Kennel Club, Orange Park Kennel Club and Derby Lane – expect to continue live racing and maintain the same level of performances. Sanford Orlando Kennel Club, which has no cardroom, would also continue to operate and would offer the same level of performances.

As we have noted, it is likely that the tracks that continue to operate would recapture some lost handle and purses, but it is our belief that whatever gains occur will be temporary. We base that conclusion on what happened in other states after greyhound tracks closed.

Phoenix Greyhound Park ceased live racing December 19, 2009, leaving Arizona with only one track, Tucson Greyhound Park. The total handle at Tucson declined in eight out of nine fiscal years leading up to 2009. From 2001 to 2009, handle fell from $25.5 million to $13.4 million, a decline of 52 percent. In 2008 and 2009, the decline was 24 percent and 18 percent, respectively. In FY 2010, Tucson had no competition for half of the year. Total handle increased 12 percent and another 6 percent the year after. In FY 2012, however, the numbers were almost identical.[58]

In Texas, Gulf Greyhound Park appears to have benefited from the closure of Corpus Christi on December 30, 2007, and Valley Park in September 2009. Gulf averaged 16 percent year-over-year declines from CY 2002 to 2008. In CY 2009, Gulf's total handle increased fractionally and the year after, it decreased fractionally. In CY 2012, it sustained a 12 percent decline, which, again, suggests that the increases may be of a temporary nature.[59] Purses at Gulf also showed significant declines prior to the closures, averaging 10 percent a year from 2001 to 2007. From 2008 to 2012, they averaged annual increases of 3 percent.[60]

The Tucson and Gulf experiences appear to demonstrate that whatever increases occur may be temporary, and could level off after a few years.

Florida greyhound tracks themselves appear to have been impacted by the rash of greyhound track closings across the country. Carey Theil, executive director of GREY2K USA, has been reviewing Florida greyhound racing data for the past several years. His organization has been involved in a number of campaigns across the country to shut down greyhound racing on the grounds that it is inhumane. PMW annual reports show Florida greyhound handle sustained 13 consecutive years of significant handle declines, from FY 1992 to FY 2005. Handle fell from $896.3 million to $448.1 million. In FY 2006, handle increased by nearly 7 percent and then fell

[58] Arizona Department of Racing annual reports; http://www.azracing.gov/archives/annualReports.html

[59] Texas Racing Commission annual reports; http://www.txrc.state.tx.us/agency/reports/AnnualRpt/annual_reports.php.

[60] Ibid.

by just 3 percent the following year. Theil noted that between December 2004 and the spring of 2006, seven tracks across the country closed or ended live racing, a factor that may have been behind the FY increase in FY 2006 in Florida. But the stabilization of handle was short-lived as it fell 13 percent in FY 2007 and another 16 percent in FY 2008. During that two-year period, there were only two closings.

Theil believes the data show that the benefit that greyhound tracks receive from other track closings are only temporary, and that handle and purse declines will quickly resume. Theil and other observers say the declines will occur because the existing base of greyhound patrons may go to the closed track or off-track betting parlors to make simulcast bets, but as they lose interest or are no longer able to go, they are not being replaced by a new generation of bettors.

We believe that the impact of the greyhound closings on purses would mirror that of the impact on handle. The six greyhound tracks that we suspect would close accounted for 21 percent of purses paid ($5.6 million) in FY 2012, according to the PMW annual report for that fiscal year. We would expect, based on our discussions with various stakeholders and industry experts, a recapture rate of roughly 50 percent, which means the existing facilities that continue to offer live racing would see their purses increase by $2.8 million. Some of that increase would be due to higher simulcast fees. Again, though, as with handle, the greyhound increase in purses may be of a temporary nature. Within three to five years, we believe that purses would begin to decline to a level below that of when decoupling took effect, as interest in greyhound wagering would continue to wane.

As for the impact on breeding, Jack Cory, lobbyist for the Florida Greyhound Association, said the state would see significant decrease in breeding activity as a result of a drastic reduction in performances. Cory argues that decoupling would be "devastating to the State of Florida and the entire pari-mutuel industry."

He said the motivation for it is to eliminate live greyhound racing so the tracks can become casinos. Cory said track operators should take the casino issue to the voters rather than attempt to become casinos through decoupling.

Cory said that the greyhound sector accounts for so much of pari-mutuel activity in Florida that taking steps to force its demise would have far-reaching impacts. Eliminating live racing would result in such a reduction that it would threaten the "viability of the greyhound industry," according to Cory, who believes there is a market for greyhound racing and that any operator who wants to close should do so, but the State should then put its permit out to bid. He argues that there will be companies willing to step forward and acquire those racing permits which, for the most part, come with the ability to offer a cardroom and simulcasting.

Tax credits are unique to greyhound racing. The credits reduce an operator's tax obligation to the State. In FY 2013, they totaled $12.3 million. The credits are one reason why State revenue from the greyhound sector is so small. They can be used toward taxes incurred on handle and daily

license fees. And if one track cannot utilize all of the credits, it can sell them to another. More than $2 million in credits were purchased by other tracks in FY 2013.[61]

PMW does not, and could not, break out regulatory costs by sector. We endeavored on our own to estimate regulatory costs for the greyhound sector. Greyhound racing accounted for 73 percent of live performances, 48 percent of live handle, 32 percent of occupational licenses and 57 percent of all pari-mutuel facilities in FY 2012, according to PMW. (2012 was the most recent year for which data were available.) We believe that we could conservatively assign half of the PMW operating budget to greyhound racing. That would mean it costs the state $4.1 million to regulate greyhound racing. The total tax revenue collected from greyhound racing was $3.1 million in FY 2012,[62] resulting in a deficit of $1 million. And that deficit would be considerably greater if PMW non-operating expenses of $4.6 million[63] were allocated to the greyhound sector. Those non-operating expenses include fingerprinting, administrative overhead and a service charge to the general revenue fund. If we again allocated half of the non-operating expenses to greyhound racing, the deficit would increase to $3.3 million.

We note that some of the greyhound tracks that would close generated very little State revenue. Melbourne paid just $9,220 in state taxes, Ebro $21,545, and Jefferson County $93,504.[64] That *de minimis* revenue clearly was not enough to cover the costs of regulating those facilities. Thus, their closures could be a net gain for the State treasury.

e. Impact Summary

Modifying or repealing live racing requirements would not impact revenue sharing per the Seminole Compact. We also see no impact on cardroom and/or slot revenue, as operators have indicated they see, little if any, crossover play from gamblers who wager on pari-mutuels.

Breeders, trainers, jockeys and players would be impacted by any reductions in the number of live performances.

The following tables provide Spectrum's estimates of the impacts of decoupling, based on our research, survey responses and analysis.

[61] Division of Pari-Mutuel Wagering, custom report

[62] Division of Pari-Mutuel Wagering, 2012 Annual Report

[63] Division of Pari-Mutuel Wagering

[64] Ibid.

Figure 21: Florida FY 2013 statewide handle by sector and Spectrum estimate of decoupling impact

	FY 2013 statewide handle (M)	Spectrum estimate with decoupling (M)	Change
Greyhound racing	$258.09	$234.86	-9.0%
Jai alai	$26.67	$21.87	-18.0%
Thoroughbred racing	$538.65	$538.65	0.0%
Quarter-horse racing	$1.48	$1.48	0.0%
Harness racing	$47.37	$35.53	-25.0%
Total	**$872.26**	**$832.39**	**-4.6%**

Source: Florida Division of Pari-Mutuel Wagering, Spectrum Gaming Group

Figure 22: Florida FY 2013 statewide purses by sector and Spectrum estimate of decoupling impact

FY 2013	Total Statewide Purses/Player Awards	Purses paid by the facilities we expect to close or significantly reduce performances	Percent of purses those facilities accounted for	Expected increase from recaptured purses at facilities that continue to operate (assume 50%)	Net purse reduction	Percent decline in total purses offered
Greyhound racing	$26,377,707	$5,595,482.00	21%	$2,797,741	$2,797,741.00	-11%
Jai alai	$5,079,995	$381,241.00	8%	$ -	$381,241.00	-8%
Quarter horse racing	$4,055,567	$202,653	5%	$ -	$202,653.00	-8%
Harness racing*	$7,370,992	$7,370,992.00	100%	$3,685,496	$3,685,496.00	-8%
Thoroughbred racing	$81,122,005	*No impact*				

Source: Florida Division of Pari-Mutuel Wagering, Spectrum Gaming Group. *Estimate a reduction in performances and purses of 50 percent

Figure 23: Florida FY 2013 facilities offering live events and Spectrum estimate of decoupling impact

	No. facilities offering live events FY 2013	Spectrum estimate with decoupling
Greyhound racing	13	7
Jai alai	6	3
Thoroughbred racing	3	3
Quarter-horse racing	2	1
Harness racing	1	1
Total	**25**	**15**

Source: Florida Division of Pari-Mutuel Wagering, Spectrum Gaming Group

E. Scenario E: Changing Tax Rates for Class III Games at Pari-Mutuels

The current tax on slot revenue (or "revenue due the State") at pari-mutuels is 35 percent. However, this tax is applicable to net slot revenue (i.e., net of promotional credits and unclaimed tickets), and the effective tax rate on gross slot revenue for FY 2013 was 30.4 percent ($152.5 million in revenue due to the State from GGR of $501.3 million, of which $435.8 million was net slot revenue).

Based on actual slot revenue at the six pari-mutuels with slots for FY 2013 (and assuming that any change in effective tax rate has a perfectly inelastic outcome):

- A 1 percentage-point change in the tax on slot revenue is valued at $4.36 million (i.e., increasing the tax rate to 36 percent, or decreasing it to 34 percent, would either increase revenue due to the State by $4.36 million or decrease it by $4.36 million, respectively).
- A 5 percentage-point change in the tax on slot revenue is valued at $21.8 million annually (i.e., increasing the tax rate to 40 percent, or decreasing it to 30 percent, would either increase revenue due to the State by $21.8 million or decrease it by $21.8 million, respectively).

Under Scenario A (the casino landscape reflecting current law/current administration, while the banked card provisions of the Seminole Compact are renewed for an additional 15 years and the Compact is not otherwise amended), we project the eight pari-mutuels with slot machines would generate $607.8 million of gross slot revenue, with net slot revenue of $547 million, which would result in revenue due to the State of $191.4 million. However, any deviation in slot revenue and/or the effective tax rate could impact revenue due to the State, as we illustrate in the following table.

Figure 24: Scenario E – Effect of changing tax rates for Class III games at pari-mutuels

Scenarios - revenue due to the State ($M)		Effective Tax Rate (on Net Slot Rev.)						
		20%	25%	30%	35%	40%	45%	50%
Gross Slot Rev. ($M)	$516.6	$93.0	$116.2	$139.5	**$162.7**	$186.0	$209.2	$232.5
	$547.0	$98.5	$123.1	$147.7	**$172.3**	$196.9	$221.5	$246.1
	$577.4	$103.9	$129.9	$155.9	**$181.9**	$207.9	$233.8	$259.8
	$607.8	**$109.4**	**$136.7**	**$164.1**	$191.4	**$218.8**	**$246.1**	**$273.5**
	$638.1	$114.9	$143.6	$172.3	**$201.0**	$229.7	$258.5	$287.2
	$668.5	$120.3	$150.4	$180.5	**$210.6**	$240.7	$270.8	$300.8
	$698.9	$125.8	$157.3	$188.7	**$220.2**	$251.6	$283.1	$314.5

Source: Spectrum Gaming Group

From this illustrative figure, each change in gross slot revenue is expressed in ±5 percent increments to our projected level (of $607.8 million), from 85 percent to 115 percent of this value, while each change in effective tax rate is expressed in ±5 percentage-point increments (between 20 percent and 50 percent). We further assume net slot revenue (the taxable base) is 90 percent of gross slot revenue under all scenarios.

As illustrated, each 5 percentage-point deviation in the effective tax rate equates to $27.3 million in revenue due to the State, all other things being equal. However, if a 15 percentage-point increase in effective tax rate (i.e., increased to 50 percent) were to result in a 15 percent decrease in slot revenue (due, perhaps, to fewer dollars available for marketing or facility upkeep/improvements), then total revenue due to the State would increase by 21.4 percent (or one-

half of the increase in effective tax rate). Conversely, if a 15 percentage-point decrease in effective tax rate (i.e., decreased to 20 percent) were to result in a 15 percent increase in slot revenue (due, perhaps, to greater marketing power or facility expansion/improvements), then total revenue due to the State would decrease by 34.3 percent (or by 80 percent of the decrease in effective tax rate).

In addition to the tax on slot revenue, each pari-mutuel location having slot machines is subject to annually recurring license fee of $2 million and a regulatory fee of $250,000. From an operator's standpoint, these two aforementioned fees amounted to 3.1 percent of net slot revenue during FY 2013 (and 2.7 percent of total GGR over the same period). In the context of this discussion, we assume these taxes/fees do not change.

Moreover, under this example (i.e., reflecting current law/current administration) any changes in effective tax rates applicable to pari-mutuels with slots in Miami-Dade and Broward counties would not result in any impact on the Seminole Compact.

1. Implications and Considerations

Changing tax rates at pari-mutuels would not impact revenue sharing per the Seminole Compact.

Increasing tax rates on pari-mutuel slot revenues most likely would reduce operating margins at a time when the Seminole Tribe is expanding and improving its operations in South Florida, thus risking deterioration of the pari-mutuels' competitiveness. The increased tax receipts could offset potentially lower gaming revenues in the short run but could leave the operators at a competitive disadvantage in the long run (or, at worst, could create a situation where one, or some, are no longer economically viable operations and potentially cease operations).

On the other hand, decreasing tax rates would assist in protecting operating margins, allowing for greater marketing reinvestment and facilities improvements, leading to greater revenues. The decreased tax receipts could be offset by higher gaming revenues. However, as we note later in the report, lowering the tax rate creates an additional risk for the State if operators view the lower taxes as a new revenue stream that can be invested outside of Florida. Any such consideration of a lower tax rate could include a commitment from operators to reinvest any additional funds in their Florida facilities.

If the State desires to grow, or at least maintain, its tax receipts from gaming facilities, the operators must be in a position to market effectively and reinvest in their properties to keep them fresh and attractive to patrons. Properties that cannot spend adequately on marketing and facilities risk being caught in a vicious cycle that results in lower employment and tax receipts.

2. Economic Well-Being of Existing Industry and Stakeholders

The following analysis shows a macro-based, illustrative presentation of an average Florida racino and the potential impact to both earnings before interest, taxes, depreciation and amortization (EBITDA) and number of employees based on changes to GGR and/or effective tax

rate (where our overarching assumption is that a material change in effective tax rate could spur these changes in GGR).

In FY 2013, Florida's six racinos had total GGR of $501.3 million – or an average of $83.6 million in GGR per racino. As of year-end 2012, the six Florida racinos collectively had 3,319 employees – or an average of 553 employees per racino in both gaming-related and non-gaming capacities.[65] Therefore, within our illustrative presentation, for an average Florida racino at status-quo, we assume annual GGR of $83.6 million and 553 employees.

We further assume this racino has annual EBITDA of $12.2 million. The EBITDA assumption is based on 25 percent of GGR net of promotional allowances (assumed at 10 percent) and less revenue due to the state (at 35 percent of net GGR). This implies annual operating expenses for this average racino of $36.7 million annually.

We show GGR changes in 10 percentage-point intervals (i.e., a range of in GGR from 80 percent to 120 percent of average GGR) and changes to the effective tax rate in 5 percentage-point intervals (i.e., a range in effective tax rate of 25 percent to 45 percent).

In our experience, a percentage decline (or improvement) in revenue (GGR and net GGR) may not have a 1:1 impact in the percentage decrease (or increase) in associated operating expenses and/or employment levels).[66] Therefore, in our illustrative presentation we assume this average racino's operating expenses and employment levels would change by one-half the amount of the change in net GGR (compared to status-quo).

The following table shows resultant net GGR, as well as percentage change in such from status quo (and for our assumed average Florida racino).

Figure 25: Average Florida racino – net GGR with change in effective tax rate

	Net GGR*	*Change in GGR*				
		(20.0%)	***(10.0%)***	***0.0%***	***10.0%***	***20.0%***
Effective Tax Rate	*25%*	$45.1	$50.8	$56.4	$62.0	$67.7
	30%	$42.1	$47.4	$52.6	$57.9	$63.2
	35%	$39.1	$44.0	$48.9	$53.8	$58.7
	40%	$36.1	$40.6	$45.1	$49.6	$54.1
	45%	$33.1	$37.2	$41.4	$45.5	$49.6
		Resultant Change in Net GGR				
	25%	(7.7%)	3.8%	15.4%	26.9%	38.5%
	30%	(13.8%)	(3.1%)	7.7%	18.5%	29.2%
	35%	(20.0%)	(10.0%)	0.0%	10.0%	20.0%
	40%	(26.2%)	(16.9%)	(7.7%)	1.5%	10.8%
	45%	(32.3%)	(23.8%)	(15.4%)	(6.9%)	1.5%

* Net of both Promotional Allowances and Gaming Tax.

[65] *2013 State of the States*. American Gaming Association.

[66] For example, while GGR at Atlantic City's casinos decreased by 41.5 percent since between 2006 and 2012 (where 2006 was historical peak of GGR), direct employment levels have fallen by 21.3 percent when comparing these periods (or by nearly one-half of the GGR decrease).

Source: Spectrum Gaming Group

The following table shows resultant EBITDA from any of the combination of changes in GGR and effective gaming tax rate (and for our assumed average Florida racino).

Figure 26: Average Florida racino – example of EBITDA with change in effective tax rate

EBITDA		*Change in GGR*				
		(20.0%)	*(10.0%)*	*0.0%*	*10.0%*	*20.0%*
Effective Tax Rate	*25%*	$9.9	$13.4	$16.9	$20.4	$24.0
	30%	$8.0	$11.3	$14.6	$17.9	$21.1
	35%	$6.1	$9.2	$12.2	$15.3	$18.3
	40%	$4.2	$7.0	$9.9	$12.7	$15.5
	45%	$2.3	$4.9	$7.5	$10.1	$12.7

Source: Spectrum Gaming Group

The following table shows resultant employment levels from any of the combination of changes in GGR and effective gaming tax rate (and for our assumed average Florida racino).

Figure 27: Average Florida racino – example of employment levels with change in effective tax rate

Employment		*Change in GGR*				
		(20.0%)	*(10.0%)*	*0.0%*	*10.0%*	*20.0%*
Effective Tax Rate	*25%*	531	563	595	627	659
	30%	514	544	574	604	633
	35%	497	525	553	580	608
	40%	480	506	531	557	582
	45%	463	487	510	533	557

Source: Spectrum Gaming Group.

It is important to note that this illustrative racino does not necessarily go from profitable to unprofitable as we shift scenarios. However, there could be a host of ramifications (both financial and social to both private and public stakeholders [and local communities]) that could occur with any material changes in GGR at any racinos in Florida (and changes that could be spurred by material changes to the effective gaming tax rate, as illustrated in this hypothetical example).

As illustrated, our average Florida racino that has EBITDA of $12.2 million annually at status quo (on GGR of revenue of $83.3 million) and has 553 employees could see these levels deteriorate with any increase in the effective gaming tax rate that then yields a negative impact to GGR. However, it is not only the operator and employees that may suffer with a downturn in GGR. Revenue due to the state from slot operations at Florida's racinos goes to the Department of Education; while the racino facility then also may have less money to offer a compelling, or competitive, offering (as there becomes less available for maintenance and/or capital expenditures, such as new products/offerings). Arguably, any decrease in GGR would also threaten the viability of the associated racetrack operation, as well as the host community and general area (i.e., employment losses and a much less stable [or not viable] racino and racetrack operation).

Also, when faced with actual or potential declines in GGR a racino operator may choose to increase promotional offerings to compete against each other and with Native American casinos (that are not subject to the same effective tax rate), then there becomes less money available to do

so (unless equivalent cost savings can be realized elsewhere, which may be reducing employees). Furthermore, if the increase in promotional offerings are not offset by respective increases in revenue, then operating expenses are impacted and this can further erode profitability.

F. Scenario F: Adjusting Restrictions on Slots in Broward/Miami-Dade

In this section, we focus on two key restrictions:

- Adjusting limits on the number of machines
- Adjusting limits on the hours of operation

A pari-mutuel slot operation Florida is currently limited to 2,000 machines. Additionally, slot gaming areas may operate daily throughout the year, and slot machine gaming areas can be open for a cumulative amount of 18 hours Monday through Friday and 24 hours Saturday, Sunday and some holidays.

It is critically important to note that none of the existing six pari-mutuel slot operations is near the 2,000-machine maximum. As of June 30, 2013, the range in number of slot machines was 801 to 1,432, with the average being 1,068. The licensee with the most slots (Isle Casino Racing at Pompano Park) had only 1,432, or 71.6 percent of the maximum allowed.

1. Adjusting Limits on the Number of Slot Machines

Several states impose a variety of restrictions on the size – or potential size – of their gaming industry. Such restrictions can range from limiting the number of gaming positions (Pennsylvania and Illinois) to restricting the maximum size of the casino floor (New Jersey) to imposing other requirements, such as requiring casinos that float on water, which is designed to essentially have the same limiting effect. Such limitations, in our experience, are based on the view that such restrictions are in the public interest, in that allowing the laws of supply and demand to be unfettered would result in a casino industry that would be too large to control or too dominant in a local economy.

To some degree, such restrictions work. A successful riverboat, for example, has few options if it cannot meet the demand in its market. In some markets, most notably Illinois, the restrictions on the number of positions – limiting the supply – can distort the relationship between supply and demand.

Current Illinois law limits casinos to no more than 1,200 gaming positions. Operators have the flexibility within that limit to alter the mix of slots, as per a formula developed by the Illinois

Gaming Board, in which one slot machine = 0.9 positions, one craps table = 10 positions, and one non-craps table game = 5 positions.[67] That limitation has created distortions in the market.

In FY 2013, the Rivers Casino in Des Plaines, which serves the Chicagoland market, reported daily GGR per slot machine at $804. That is almost twice the daily win per unit reported by its closest competitor, Harrah's Joliet (located in a less-populous region of the same market) at $426. To put those numbers in perspective, we note that all the racinos in Florida reported a collective daily win per unit of $215 over the same 12-month period.

Spectrum has developed broad-based modeling over the years that assumes slot players, on average, lose money at a rate of 80 cents per minute, or $48 per hour. By that ratio, the Rivers slots are being played 17 hours per day, every day of the year. In such a situation, Rivers – as well as Harrah's Joliet – would benefit if they were able to add supply.

Such a distorted level of daily win per unit indicates that certain phenomena are occurring:

- At peak periods, such as Saturday nights, it is likely that every gaming position is occupied, thus forcing players to wait, or in some cases, to play machines or games other than their favorites.
- The gaming experience for many players is less satisfying than it otherwise would be, as they often have to elbow their way to machines or play games that are not their first choice.
- To some unknown degree, a number of adults who would otherwise visit a casino during peak or near-peak periods are more likely to stay away or choose an alternate entertainment option.

That is not the situation in Florida. Our assessment of the situation in Florida, based largely on the current daily win per unit, is that Florida operators believe patron demand does not justify adding more slots. Based on current performance levels, Spectrum believes that any increase in the 2,000-slot limit would have no impact on the market.

Casino management must carefully weigh decisions regarding the purchases of slot machines. Each machine costs, on average, about $18,000, which does not take into account any additional construction cost that may be necessary for space to add the games. Other factors weigh on such decisions as well, including regulatory and legislative uncertainty. For example, racino operators will be less likely to invest in additional supply if they fear that the competitive landscape may become more intense in coming years.

We also explored this issue from the standpoint of slot suppliers, who collectively are

[67] Spectrum Gaming Group, "Market Analysis/Impacts Report: Projected Gross Gaming Revenue, Employment, and Macro Economic Impacts of Expanded Casino Gambling in Illinois, March 2, 2012, p. 9 http://illinoisjobsalliance.org/wp-content/uploads/2012/04/Spectrum-Gaming-Group-Report-for-Illinois-Revenue-and-Jobs-Alliance.pdf

represented by the Association of Gaming Equipment Manufacturers ("AGEM"), a Las Vegas-based trade group. AGEM noted the following:

> At the outset, AGEM found that Florida, for the most part, has been reasonably progressive in an easing of some of the regulatory burdens that existed when Florida initially became a commercial slot machine jurisdiction. From an employment and capital facilities standpoint, all of AGEM members that sell slot machines and gaming equipment in Florida maintain a presence in the state, with offices and distribution locations staffed mostly with sales and service personnel. The sales teams are responsible for maintaining relationships with all of the gaming locations in the state, while service personnel are responsible for ensuring machines and other technology have maximum "up time" while conforming to the proper technical standards and regulations present in the state. Furthermore, several of the suppliers also use their Florida operations as a hub for further distribution into gaming markets in the cruise ship, tribal, Caribbean and Latin/Central American markets.
>
> The exact investment in offices and staffing is not readily obtainable, and our members are hesitant to try and identify any statutory or regulatory changes that would directly impact decisions to expand capital facilities or increase employment. Members instead indicated that such decisions will be driven as an indirect result of general market growth and expansion in Florida. Increases in the number of properties and the number of gaming positions in Florida will essentially drive, on a company-by-company basis, the decisions to potentially expand offices and staffing in the state.

Additionally, AGEM identified four broad areas that its members cite as opportunities to increase supplier investment and employment in Florida, although those members could not quantify either:

- Clarify statutory and regulatory standards for suppliers.
- Provide an exemption to the public records law that would allow suppliers to protect sensitive, proprietary information.
- Adopt shipping and related oversight procedures for slot machine regulation that are common in other jurisdiction.
- Allow operators to offer wide-area progressive[68] slot jackpot systems among properties, which AGEM suggests could increase revenue by 20 percent to 40 percent for machines linked to such a system.[69] [70]

[68] Wide-area systems link progressive slot jackpots among multiple properties.

[69] Letter to Spectrum Gaming Group from AGEM Executive Director Marcus Prater, Aug. 28, 2013

[70] Wide-area progressives are electronically linked slot machines, offering large, progressive jackpots to customers in many related or non-related gaming locations, simultaneously.

2. Adjusting Limits on the Hours of Operation

With respect to operating hours, our extensive knowledge and experience within the casino gaming industry indicate that increasing the number of hours (i.e., beyond 18 hours during midweek days) would not have a material impact on GGR.

This conclusion is supported by an analysis of a similar situation faced by the casino industry more than 20 years ago in New Jersey, where casinos are geographically limited to Atlantic City. Prior to 1991, the New Jersey Casino Control Act limited gaming hours: Casino floors had to close at 4 a.m. on weekdays and 6 a.m. on weekends and holidays, and were allowed to reopen at 10 a.m. That statute was later amended, first in June 1991 to allow the Casino Control Commission to authorize 24-hour gambling on weekends, holidays and designated "special events." In May 1992, the Act was amended again to give the commission full authority to set gaming hours. That month, the industry's trade group began an intense lobbying effort to secure 24-hour casinos. Among the promises made by the industry at that time were that 24-hour gambling would:

- Create 1,200 additional full-time-equivalent jobs.
- Generate additional annual gaming revenue of between $90 million and $105 million (which would have equated to roughly a 3.5 percent increase).
- Increase annual vendor purchases and non-gaming revenues by between $6 million and $10 million each.
- Improve the ability of casinos to implement marketing programs and to schedule employees.
- Make life easier on employees, many of whom would enjoy more regular working hours.[71]

The linkage between expanded gaming hours and most of these projections would be difficult to measure, as so many factors come into play. However, some of these projections fell short. Employment – which was about 44,000 at the time – did not rise, and a decade later, still hovered around the same mark. Today, 22 years later, the industry employs only 35,000, although multiple macro and micro factors have contributed to that decline.

Other projections, however, made sense. Round-the-clock scheduling is easier to implement than a series of disjointed shifts. And certainly, resorts that do not offer 24-hour gaming could be at a disadvantage when competing against round-the-clock destinations, as would be the case of Florida racinos vs. the Seminole casinos.

[71] Petition 150201, filed by Casino Association of New Jersey with New Jersey Casino Control Commission, May 29, 1992.

At the same time, however, extended gaming hours might have had some immediate successes. In its May 29, 1992, petition to the New Jersey Casino Control Commission, the Casino Association of New Jersey wrote: "During the second half of 1991, 24-hour gaming was the key factor which turned a declining year (1st half) into an acceptable year (2nd half). Twenty-four hour gaming halted the decline in gross revenues, and stimulated a year-end increase. It contributed to the end of a layoff cycle, as casinos began to re-employ individuals in the summer and 2nd half. Twenty-four hour gaming produced more tax revenues during the latter half of the year and stimulated more private-sector purchases of goods and services. It contributed to increases in operating income for most properties."[72]

We selected a comparison of the years 1991 and 1993 in an effort to isolate the impacts of 24-hour gambling. No significant capacity came into the market during this time, yet the hours of operation changed significantly during that period. In 1991, Atlantic City still had limited hours (although 24-hour gambling was allowed on weekends and holidays during the second half), while 1993 offered non-stop gambling.

At the same time, there is no evidence in Atlantic City that the positive impact from expanding hours was compounded from year to year. Overall growth rates did not begin to climb dramatically after 1993, and our analysis suggests that growth rates in the 1980s – a decade of limited hours – were far higher (although significant increases in capacity during that time makes comparisons difficult).

Figure 28: New Jersey casinos before and after 24-hour gaming

	1991	1993	Change
Casino revenue (in millions)	$2,991	$3,301	10%
Gross operating profit (in millions)	$716	$836	17%
no. of employees	43,910	44,111	0.5%
square footage	774,000	797,155	3%
no. of hotel rooms	9,489	8,946	-6%
GOP margin	23.9%	25.3%	1.4%
Revenue per square foot	$3,864	$4,141	7%
Revenue per employee	$68,117	$74,834	10%
Revenue per hotel room	$315,207	$368,992	17%

Source: New Jersey Casino Control Commission, Spectrum Gaming Group

The following table attempts to isolate the impact of 24-hour gambling by examining the compound annual growth period for three separate periods: 1992-1997, 1993-1997 and 1991-1996. These were generally healthy stretches for Atlantic City, with steady growth in revenue. The commencement of round-the-clock gambling in the spring of 1992 might have had a small impact during the initial period, but that impact would be diluted over a broader stretch of time. For the period of 1993-1997, hours did not change and would have had no impact. Once we determined the compound annual growth rate ("CAGR") for these three periods, we applied them to the base

[72] Ibid.

year of 1991. Any growth over and above the CAGR would be credited to the increased hours of operations.

Figure 29: Compound annual growth rate of New Jersey casinos before and after 24-hour gaming

	CAGR	1993 adj. revenue based on CAGR	Growth attributable to 24-hour gaming	Pct. Over base year revenue	Annualized growth
CAGR, 1992-1997	3.3%	$3,194.49	$106.51	3.6%	1.7%
CAGR, 1991-1996	4.2%	$3,247.00	$54.00	1.8%	0.9%
CAGR, 1993-1997	3.5%	$3,203.35	$97.65	3.3%	1.3%

Source: New Jersey Casino Control Commission, Spectrum Gaming Group

The above table demonstrates that the period of 1992-1997 offered the most favorable scenario as to the positive impact of 24-hour gambling. This period had the lowest base CAGR, which would mean any additional growth, would be magnified.

This scenario attributes an annual growth in revenue of 1.7 percent to the hours of operation. Looking at all three scenarios, it is clear that extending hours may only grow GGR by less than 2 percent, which may not a material factor for existing operators.

So, although extending hours would be an industry-friendly move by the State, its impact would be small and would vary by property. Some might even lose money by extending hours (as any incremental GGR resulting from adding hours of operations may be outweighed by associated increases in operating expenses).

At the same time, we note that the original rationale in most states for limiting the hours of operation was to give gamblers a break, to ensure that they took a forced respite. We can identify no way to quantify whether such respites are effective.

3. Implications and Considerations

Increasing the hours of operation and/or allowing existing pari-mutuels in Broward and Miami-Dade counties to have more than 2,000 slot machines would not impact revenue sharing per the Seminole Compact.

On the surface, increasing the maximum slot units per facility or amending the current regulations for the hours of operation – or both – will have no material positive impact on revenues and overall operating performance, based on the discussion above. Requiring the facilities to expand the number of units or hours, in Spectrum's opinion, would have negative consequences due to higher operating costs without a corresponding increase in revenue.

However, from a fiscal perspective (and as a purely hypothetical example), if pari-mutuels with slots in Miami-Dade and/or Broward counties were to materially increase their respective number of slot machines (or undergo any material changes, such as increasing size, scope, amenities, etc.), this could result in increases in revenue due to the State resulting from incremental increases in slot revenue. It is our understanding (under this defined scenario) that any such

changes that would be limited to pari-mutuels in Miami-Dade and Broward counties (and limited to slot activities) and would not result in any impact on the Seminole Compact.

For example, if any (or all) of the eight pari-mutuels with slots in Miami-Dade and Broward counties (inclusive of Dania Jai-Alai) were to increase to 2,000 slots, or more, per location, this would alter the competitive landscape (assuming the Seminole casinos and Miccosukee casino do not materially alter their respective casino capacities and/or scope of operations). Under current law/current administration (and the Baseline scenario), the eight pari-mutuels in Miami-Dade and Broward counties have 8,409 slot machines, representing 51.6 percent of all slots in the two counties (assuming Native American operators have a total of 7,877 slots in the two counties). However, if we assume the pari-mutuels all maximize their slots (at 16,000 in total, or 2,000 per location), that would mean that pari-mutuels would then have 67 percent of all gaming positions in the two counties (again, assuming Native American operators maintain same level of slots operating in the two counties). In this hypothetical example, such a move could yield a shift in GGR (amongst the casinos), and any GGR diverted from Native American operators to pari-mutuel operators would then be subject to the effective gaming tax, which would benefit the State, while any new (induced) GGR generated as a result of slot expansion at pari-mutuels also would serve to increase revenue due to the State.

G. Scenario G: Authorizing Slots at Pari-Mutuels Statewide

The salient assumption under this scenario is that there could be 20 pari-mutuel locations statewide outside of Broward and Miami-Dade counties that could offer slot machines.

Currently, of the existing 15 casinos in Florida (and also with 16 casinos, inclusive of Dania Jai-Alai), 56 percent of Florida adults are within a one-hour drive of a Florida casino, while 81.4 percent are within a two-hour drive. However, with 20 additional pari-mutuel casinos throughout Florida (assuming all are viable and at their current locations), 97.1 percent of Florida adults would be within a one-hour drive of an in-state casino, while nearly all Florida adults (at 99.8 percent) would be within a two-hour drive. To put it another way, nearly 6 million more Florida adults would be within a one-hour drive of a Florida casino under such expansion (from 8.1 million adults currently to 14.1 million adults with 36 casinos statewide).

Under this casino expansion scenario, up to 23 of the 67 counties in Florida could have one or more casinos.

Currently, there are no out-of-state adults (i.e., non-Floridians) within a one- or two-hour drive of an existing Florida casino. However, under this aforementioned expansion scenario, there would be 394,000 out-of-state adults (from Alabama and Georgia) within a one-hour drive of a Florida casino, while there would be 1.67 million out-of-state adults (adding Mississippi) within a two-hour drive.

Once both Hialeah Park and Dania Jai-Alai are operational with an assumed 1,000 slot machines apiece, we estimate there will be 22,973 slot machines and 344 table games (and 25,037

gaming positions) at 16 casinos in Florida. If each of the 20 pari-mutuels outside of Miami-Dade and Broward counties were to add 2,000 slots per location (the maximum allowed under our assumption set, as well as per current law/current administration), a total of 40,000 slot machines would be added to pari-mutuels in 18 counties, while 16 of these counties do not currently have a casino. However, we do not believe that all 20 pari-mutuels would add 2,000 slots, as some would warrant considerably fewer slots, and we believe some locations would not even be economically viable (per our assumption set, as each location would require a minimum of 500 slots having at least $200+ in average win per gaming position per day).

1. Implications and Considerations

It is our understanding that if this scenario were implemented, all revenue sharing per the Seminole Compact would end. However, adopting this scenario could result in incremental increases in revenue due to the State, as well as incremental jobs and license fees, from development of casinos at pari-mutuel locations statewide.

The revenue generated by slot machines could provide a valuable funding source for racing purses and improved racing facilities, as demonstrated with the South Florida racinos and in other racino states. This could in turn enable the host pari-mutuel facilities to attract more and higher-quality horses and jockeys (and greyhounds), which would flow through to benefit trainers and breeders. However – as results in other racino states have shown – a higher-quality racing product does not necessarily translate into higher live handle or increased attendance or popularity for the racing industry, as this activity is in decline nationwide.

As noted in Chapter I[E][3], the addition of slot machines may positively impact cardroom revenues. Further, the capital improvements required to add slot machines may require, or at least encourage, the track to simultaneously upgrade its cardroom, which could make it more popular with patrons.

Additionally, the State may want to examine issues of saturation in certain areas throughout Florida. As such, some existing operators could face revenue declines, which could in turn lead to deterioration of profitability and related operating margins. Material reductions to profitability and operating margins may result in a gaming offering not consistent with the quality of other tourist-related attractions in the State.

Having gaming facilities throughout the state could impact Florida's family-friendly image in that travelers could be continually exposed to advertisements and other marketing materials for one or more slots locations. As we noted in detail in our first report, Part 1-A, many Florida business leaders, particularly in the Orlando area, fear that the family-related tourism brand that has worked well in Orlando and other regions could be jeopardized by any perceived shift to more gaming-oriented themes.

The scale of such expansion would add logistical concerns regarding the cost of regulation because the gaming facilities would be so widely dispersed.

Expanding from eight state-regulated slot locations (including Dania Jai-Alai) to 28 would represent an unprecedented casino expansion in the United States. Once this action is taken, it will be difficult to unscramble the egg.

2. GGR and Related Projections (Minimizing Cannibalization)

Under this scenario, we project slot machines would be economically viable additions at 18 (of the 20) pari-mutuels outside of Miami-Dade and Broward counties. We project these 18 pari-mutuels could collectively generate $1.74 billion in GGR annually from 18,300 slot machines (averaging $260 in slot revenue per unit per day). Of the 18 locations that would have slots, the average location would have 1,017 slots, while the median value in our result set is 550 slots (i.e., nine locations would have 500 slots, while four locations would warrant 2,000 slots per our modeling and assumptions utilized).

We project the eight pari-mutuels in Miami-Dade and Broward counties would generate $609 million in gross slot revenue. Therefore, under this scenario, there would be 26 pari-mutuels with slots that could generate $2.345 billion of gross slot revenue, with net slot revenue of $2.11 billion. This level of revenue would result in revenue due to the State as follows:

- $738.8 million under the current 35 percent tax rate.
- $569.9 million at the US median effective GGR tax rate of 27 percent.
- $1.14 billion at the effective rate(s) in Pennsylvania.

We estimate the eight Native American casinos would have $1.833 billion of combined slot and table games revenue.

In total, we project statewide GGR from a total of 34 pari-mutuel and Native American casinos would be $4.179 billion. A summary of this scenario is in the following table:

Figure 30: Scenario G-1, minimizing cannibalization – Slots at pari-mutuels statewide, landscape and projections

Florida Casinos	Authorizing pari-mutuel facilities in counties other than Miami-Dade & Broward to offer slot machines				*Compared to Baseline*	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	*$ Var.*	*% Var.*
# Locations	26	8	0	34	*18*	*112.5%*
# Counties	18	6	0	21	*15*	*250.0%*
# Slots	26,709	14,564	0	41,273	*18,300*	*79.7%*
# Table Games	0	344	0	344	*344*	*n/a*
# Gaming Positions	26,709	16,628	0	43,337	*20,364*	*88.6%*
GGR ($M)	$2,345.3	$1,833.4	$0.0	$4,178.7	*$1,723.0*	*70.2%*
GGR / Position / Day	$241	$302	$0	$264	*($29)*	*-9.8%*

Source: Spectrum Gaming Group

Additionally, we project the statewide casino participation rate (i.e., Florida adults visiting Florida casinos) would be 33.6 percent; the rate for adults residing within a one-hour drive of a casino would be 36.3 percent and 30 percent beyond a one-hour drive.

3. Economic/Fiscal Impact (Minimizing Cannibalization)

Next, we determine the economic impacts of these scenarios using the REMI Tax-PI model, using the Default Budget and three different tax rates (see Chapter I[H] for methodology detail). Scenario G-1 includes one year of construction in the first year and does not include Compact revenues. The economic impacts rise sharply in the first year which only reflects construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 6,650 and Gross State Product is $972 million under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of -$80.2 million under the US median gaming tax rate to -$60.6 million under the Default Budget.

Figure 31: Scenario G-1, slots at pari-mutuels statewide but minimizing cannibalization – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	9,833	6,807	6,792	6,650	6,585	6,592
Gross State Product	$631	$926	$954	$972	$998	$1,030
Gaming Taxes	($0.91)	$14.26	$29.65	$29.70	$29.82	$30.12
Sales/Use Tax	$5.95	$9.39	$7.33	$8.02	$8.58	$9.18
Lottery	$6.45	$6.48	($0.09)	($0.33)	($0.48)	($0.62)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$3.69	$8.80	$10.64	$11.78	$12.76	$13.70
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	6,619	6,695	6,793	6,930	6,650	
Gross State Product	$1,066	$1,106	$1,148	$1,194	$972	
Gaming Taxes	$30.51	$30.96	$31.35	$31.70	$29.70	
Sales/Use Tax	$9.84	$10.57	$11.39	$12.27	$8.02	
Lottery	($0.70)	($0.74)	($0.75)	($0.72)	($0.33)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$14.63	$15.67	$16.68	$17.73	$11.78	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 32: Scenario G-1, slots at pari-mutuels statewide but minimizing cannibalization – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	9,840	6,670	6,523	6,403	6,359	6,385
Gross State Product	$632	$915	$932	$951	$979	$1,012
Gaming Taxes	($0.43)	$7.19	$15.46	$15.92	$16.43	$16.99
Sales/Use Tax	$5.95	$9.30	$7.02	$7.59	$8.14	$8.74
Lottery	$6.45	$6.46	($0.13)	($0.37)	($0.51)	($0.65)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$3.69	$8.74	$10.43	$11.47	$12.42	$13.34
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	6,431	6,522	6,633	6,781	6,403	
Gross State Product	$1,049	$1,090	$1,132	$1,179	$951	
Gaming Taxes	$17.58	$18.18	$18.80	$19.42	$15.92	
Sales/Use Tax	$9.41	$10.16	$10.98	$11.87	$7.59	
Lottery	($0.73)	($0.77)	($0.77)	($0.74)	($0.37)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$14.25	$15.29	$16.32	$17.37	$11.47	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 33: Scenario G-1, slots at pari-mutuels statewide but minimizing cannibalization – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	9,843	6,647	6,471	6,354	6,311	6,338
Gross State Product	$632	$913	$928	$947	$975	$1,008
Gaming Taxes	($0.36)	$5.92	$12.73	$13.07	$13.45	$13.88
Sales/Use Tax	$5.95	$9.28	$6.96	$7.51	$8.06	$8.65
Lottery	$6.45	$6.46	($0.14)	($0.38)	($0.52)	($0.66)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$3.69	$8.73	$10.38	$11.41	$12.35	$13.26
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	6,386	6,478	6,584	6,735	6,354	
Gross State Product	$1,044	$1,085	$1,128	$1,175	$947	
Gaming Taxes	$14.34	$14.81	$15.30	$15.78	$13.07	
Sales/Use Tax	$9.32	$10.06	$10.87	$11.75	$7.51	
Lottery	($0.74)	($0.77)	($0.78)	($0.75)	($0.38)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$14.17	$15.21	$16.22	$17.27	$11.41	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 34: Scenario G-1, slots at pari-mutuels statewide but minimizing cannibalization – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	9,836	6,730	6,647	6,527	6,483	6,505
Gross State Product	$631	$920	$942	$962	$989	$1,023
Gaming Taxes	($0.61)	$10.19	$21.97	$22.71	$23.50	$24.37
Sales/Use Tax	$5.95	$9.33	$7.15	$7.79	$8.37	$8.98
Lottery	$6.45	$6.47	($0.11)	($0.35)	($0.49)	($0.63)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$3.69	$8.76	$10.53	$11.63	$12.60	$13.54
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	6,553	6,643	6,747	6,896	6,527	
Gross State Product	$1,060	$1,101	$1,144	$1,191	$962	
Gaming Taxes	$25.27	$26.19	$27.14	$28.09	$22.71	
Sales/Use Tax	$9.67	$10.43	$11.26	$12.16	$7.79	
Lottery	($0.71)	($0.75)	($0.76)	($0.73)	($0.35)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$14.47	$15.53	$16.57	$17.63	$11.63	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

An additional 18 pari-mutuels outside of Miami-Dade and Broward counties would yield another $36 million in license fees and $4.5 million in regulatory fees annually.

Under this sub-scenario, we believe it is reasonable to expect the additional 18 pari-mutuel casinos throughout Florida would have net direct employment of 8,555 FTEs statewide. Under this sub-scenario, we project a total of 34 casinos statewide would result in net direct employment of 20,363 FTEs.

4. GGR and Related Projections (Maximizing GGR)

In contrast to the previous scenario, where the objective was to minimize cannibalization of GGR to existing casinos, under this scenario, we assume the seven pari-mutuel operators outside of Miami-Dade and Broward counties and within a one-hour drive of an existing Florida casino could have more than 500 slot machines each.

Under this scenario, we project slot machines would be economically viable additions for at least 18 of the 20 pari-mutuels outside of Miami-Dade and Broward counties. We project these 18 pari-mutuels could collectively generate $2.073 billion in GGR annually from 25,700 slot machines (averaging $221 in slot revenue per unit per day). Of the 18 pari-mutuels with slots, the average would have 1,428 slots, while the median 1,500 (two pari-mutuels would have 500 slots, 14 would have at least 1,100, and five locations would warrant 2,000 slots, per our modeling and assumptions utilized).

We project the eight pari-mutuels in Miami-Dade and Broward counties would generate $581.7 million in gross slot revenue. Therefore, under this scenario, there would be 26 pari-mutuels with slots that could generate $2.655 billion of gross slot revenue, with net slot revenue of $2.39 billion. This level of revenue would result in revenue due to the State as follows:

- $836.3 million under the current 35 percent rate.
- $645.1 million at the US median effective GGR tax rate of 27 percent.
- $1.29 billion at the effective rate(s) in Pennsylvania.

We estimate the eight Native American casinos would have $1.489 billion of combined slot and table games revenue. In total, we project statewide GGR from a total of 34 pari-mutuel and Native American casinos would be $4.144 billion. A summary of this scenario:

Figure 35: Scenario G-2, maximizing GGR to new facilities – slots at pari-mutuels statewide, landscape and projections

Florida Casinos	Authorizing pari-mutuel facilities in counties other than Miami-Dade & Broward to offer slot machines				Compared to Baseline	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	$ Var.	% Var.
# Locations	26	8	0	34	*18*	*112.5%*
# Counties	18	6	0	21	*15*	*250.0%*
# Slots	34,109	14,564	0	48,673	*25,700*	*111.9%*
# Table Games	0	344	0	344	*344*	*n/a*
# Gaming Positions	34,109	16,628	0	50,737	*27,764*	*120.9%*
GGR ($M)	$2,654.8	$1,489.2	$0.0	$4,144.1	*$1,688.3*	*68.7%*
GGR / Position / Day	$213	$245	$0	$224	*($69)*	*-23.6%*

Source: Spectrum Gaming Group

Additionally, we project the statewide casino participation rate would be 33.6 percent; the rate for adults residing within a one-hour drive of a casino would be 36.3 percent and 30 percent beyond a one-hour drive.

5. Economic/Fiscal Impacts (Maximizing GGR)

Next, we determine the economic impacts of these scenarios using the REMI Tax-PI model, using the Default Budget and three different tax rates (see Chapter I[H] for methodology detail). Scenario G-2 includes one year of construction in the first year and does not include Compact revenues. The economic impacts rise sharply in the first year which only reflects construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 9,209 and Gross State Product is $1.0 billion under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of -$73.4 million under the US median gaming tax rates to -$54.5 million under the Default Budget.

Figure 36: Scenario G-2, slots at pari-mutuels statewide and maximizing GGR – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	9,833	9,372	9,400	9,209	9,089	9,048
Gross State Product	$631	$951	$985	$1,002	$1,025	$1,054
Gaming Taxes	($0.91)	$17.14	$35.25	$35.29	$35.40	$35.75
Sales/Use Tax	$5.95	$10.64	$10.08	$11.17	$12.01	$12.85
Lottery	$6.45	$6.67	$0.27	($0.00)	($0.19)	($0.36)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$3.69	$9.68	$12.64	$14.43	$15.84	$17.13
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	9,040	9,093	9,167	9,290	9,209	
Gross State Product	$1,087	$1,126	$1,167	$1,212	$1,002	
Gaming Taxes	$36.20	$36.72	$37.18	$37.58	$35.29	
Sales/Use Tax	$13.75	$14.73	$15.78	$16.90	$11.17	
Lottery	($0.47)	($0.52)	($0.54)	($0.53)	($0.00)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$18.34	$19.65	$20.90	$22.15	$14.43	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 37: Scenario G-2, slots at pari-mutuels statewide and maximizing GGR – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	9,840	9,187	9,046	8,879	8,785	8,771
Gross State Product	$632	$937	$956	$974	$999	$1,030
Gaming Taxes	($0.43)	$7.66	$16.43	$16.91	$17.45	$18.05
Sales/Use Tax	$5.95	$10.50	$9.66	$10.61	$11.44	$12.28
Lottery	$6.45	$6.65	$0.22	($0.06)	($0.24)	($0.40)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$3.69	$9.59	$12.36	$14.01	$15.38	$16.64
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	8,787	8,854	8,947	9,088	8,879	
Gross State Product	$1,064	$1,103	$1,145	$1,192	$974	
Gaming Taxes	$18.68	$19.33	$20.00	$20.67	$16.91	
Sales/Use Tax	$13.18	$14.17	$15.22	$16.34	$10.61	
Lottery	($0.51)	($0.55)	($0.57)	($0.56)	($0.06)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$17.85	$19.16	$20.41	$21.67	$14.01	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 38: Scenario G-2, slots at pari-mutuels statewide and maximizing GGR – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	9,843	9,163	8,992	8,830	8,736	8,725
Gross State Product	$632	$935	$952	$970	$994	$1,026
Gaming Taxes	($0.36)	$6.36	$13.62	$13.98	$14.38	$14.85
Sales/Use Tax	$5.95	$10.49	$9.61	$10.53	$11.35	$12.19
Lottery	$6.45	$6.65	$0.22	($0.07)	($0.25)	($0.41)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$3.69	$9.57	$12.32	$13.95	$15.31	$16.57
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	8,740	8,809	8,901	9,042	8,830	
Gross State Product	$1,060	$1,099	$1,141	$1,187	$970	
Gaming Taxes	$15.34	$15.85	$16.37	$16.89	$13.98	
Sales/Use Tax	$13.09	$14.06	$15.11	$16.23	$10.53	
Lottery	($0.52)	($0.56)	($0.58)	($0.56)	($0.07)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$17.77	$19.08	$20.33	$21.59	$13.95	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 39: Scenario G-2, slots at pari-mutuels statewide and maximizing GGR – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	9,836	9,249	9,172	9,011	8,918	8,903
Gross State Product	$631	$941	$967	$986	$1,010	$1,041
Gaming Taxes	($0.61)	$10.75	$23.10	$23.89	$24.73	$25.66
Sales/Use Tax	$5.95	$10.55	$9.81	$10.82	$11.68	$12.54
Lottery	$6.45	$6.66	$0.24	($0.04)	($0.22)	($0.38)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$3.69	$9.61	$12.46	$14.18	$15.59	$16.87
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	8,915	8,982	9,075	9,214	9,011	
Gross State Product	$1,076	$1,115	$1,158	$1,205	$986	
Gaming Taxes	$26.62	$27.62	$28.63	$29.66	$23.89	
Sales/Use Tax	$13.46	$14.46	$15.52	$16.67	$10.82	
Lottery	($0.49)	($0.54)	($0.56)	($0.54)	($0.04)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$18.10	$19.43	$20.69	$21.98	$14.18	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

An additional 18 pari-mutuels outside of Miami-Dade and Broward counties would yield another $36 million in license fees and $4.5 million in regulatory fees.

Under this scenario, we believe it is reasonable to expect the additional 18 pari-mutuel casinos throughout Florida would have net direct employment of 12,015 FTEs statewide. Under this scenario, we project a total of 34 casinos statewide would result in net direct employment of 22,161 FTEs.

H. Scenario H: Authorizing Table Games at Pari-Mutuels

Our overarching assumption is that table games or other Class III games under this scenario are exclusive of existing and/or future cardroom operations at pari-mutuels. For example, in addition to slot machines, we assume the existing pari-mutuels would be able to offer table games such as blackjack, baccarat, mini-baccarat, as well as other card and/or dice games, including roulette and craps games. As a direct result, we assume Florida's Native American casinos also would have the ability to offer all type of Class III games, consistent with our assumptions in Scenario B.

Our discussion and analysis includes two distinct scenarios for expanded casino gaming at pari-mutuels in Florida:

- Only the existing pari-mutuels offering slots, including Dania Jai-Alai, would offer table games.
- All 28 pari-mutuels would offer both slots and table games.

Our methodology in determining additional table games units at pari-mutuels (and for the Seminole Big Cypress and Brighton locations):

- At locations where slots are currently operating, we assume table games will be incrementally added to the existing slot supply, and we model/allocate number of total table games at a ratio of 3 percent of slot units (i.e., one table game for every 33 slots) based on slot machine counts as of June 30, 2013. This ratio is consistent with actual table games to slot machine allocation data for the 15 states having commercial casino operations (and both slots and table games) through the 12 months ended March 2013.
- We assume the 20 pari-mutuels outside of Miami-Dade and Broward counties, as well Dania Jai-Alai, also would have table games at a ratio of 3 percent of slot units (i.e., one table game for every 33 slots), while respective slot totals are determined via our modeling.

Under each of the scenarios above, we assume the addition of roulette and craps games at all of the Seminole casinos. (Refer to Scenario B for assumptions/outcomes concerning the addition of these types of games to Native American casinos.)

1. Implications and Considerations

It is our understanding that if this scenario were implemented, revenue sharing per the Seminole Compact would be impacted, as follows:

If only Broward/Miami-Dade pari-mutuel locations offered table games: The Seminole Tribe would be relieved of the minimum revenue share payment and would also be entitled to a reduction in the amount of 50 percent of the decline in revenues from its Broward County facilities, comparing the year before the new gaming began with the 12 months after the new gaming began. Although the Seminole Tribe would also be released from making the guaranteed minimum payments, it would still be obligated to make payments based on the percentage revenue sharing schedule. If this provision were triggered, the Seminole Tribe would receive the relief described until the revenues once again exceed the base year at which point the reduction would be eliminated.

If any or all of the 20 pari-mutuel locations outside of Broward and Miami-Dade counties offered slots and/or table games: It is our understanding that if this scenario were implemented, all revenue sharing per the Seminole Compact would end.

We caution, however, that not all table game operations are created equal, and not all are automatically profitable. An operator with a predominantly local player base may be forced by market conditions to skew toward low-limit tables, which would by definition be less profitable, and generate less GGR and gaming taxes than some other tables would under similar conditions.

That said, the addition of table games creates the opportunity for well-capitalized operations to add first-class hotels and other resort amenities in a bid to attract higher-spending gamblers. Such players have the expectation of being provided complimentary rooms and luxury services.

A critical element in authorizing table games would be the tax rate on table-games revenue. Jurisdictions that have set a high tax rate on slot revenue have established lower rates on table games because of the significantly higher labor costs involved. For example, Pennsylvania had an effective tax rate of 54 percent on slot revenue and an effective rate of 15 percent[73] on table games revenue for its fiscal year ended June 2013. Delaware, Maryland and West Virginia also have established a bifurcated gaming-revenue tax scheme. One of the newest casino jurisdictions (Ohio) set a tax rate of 33 percent on both slots and tables.

As noted in Scenario G, the revenue generated by slot machines and table games statewide could provide a valuable funding source for racing purses and improved racing facilities, as demonstrated with the South Florida racinos and in other racino states. This could in turn enable

[73] Pennsylvania's effective table games tax has two salient components: a state tax and a local-share assessment. The state tax on banking, non-banking and electronic gaming tables is 14 percent for the first two years following commencement of table games operations at each licensed facility; the rate drops to 12 percent following this period. The local share assessment is 2 percent.

the host pari-mutuel facilities to attract more and higher-quality horses and jockeys (and greyhounds), which would flow through to benefit trainers and breeders. However – as results in other racino states have shown – a higher-quality racing product does not necessarily translate into higher handle/increased popularity for the racing industry, as this activity is in decline nationwide.

As noted in Chapter I[e][3], the addition of slot machines may positively impact cardroom revenues. The cardrooms may also benefit from crossover between poker players and blackjack players. The capital improvements required to add slot machines and table games may require, or at least encourage, the host racetrack to simultaneously upgrade its cardroom, which could make it more popular with patrons.

2. If Only Broward/Miami-Dade Pari-Mutuels Offered Slots and Tables

The salient assumption under this scenario is that all pari-mutuels in Miami-Dade and Broward counties (inclusive of Dania Jai-Alai) would offer both slots and table games, while seven Native American casinos would add Class III casino-style table games, as well. None of the 20 pari-mutuels outside of Miami-Dade and Broward counties would have slots or tables, only cardrooms.

Under this sub-scenario, we estimate there would be 22,973 slot machines and 670 table games (and 26,995 gaming positions) at 16 casinos statewide. Assuming existing casinos do not add or subtract gaming positions from the slot and table games counts as of June 30, 2013, there would be 9,929 gaming positions (36.7 percent of statewide gaming positions) at the eight racetrack locations in Broward and Miami-Dade counties, while the balance of statewide gaming positions (63.3 percent) would be at the eight Native American casinos. Under this scenario, Broward and Miami-Dade counties would have 71.2 percent of the total statewide gaming positions and Hillsborough County would have 21.8 percent. There would still be six counties in Florida with at least one casino.

a. GGR and Related Projections

Under this scenario, we project the eight pari-mutuels in Miami-Dade and Broward counties could collectively generate $730.4 million in GGR annually from 9,909 gaming positions. We project total slot revenue of $619.8 million from 8,409 slot machines and total table revenue of $110.6 million from 250 table games. From this, we assume taxable GGR would be $668.4 million. This level of revenue would result in revenue due to the State as follows:

- $234 million under the current 35 percent tax rate.
- $180.5 million at the US median effective GGR tax rate of 27 percent.
- $314.5 million at the effective rate(s) in Pennsylvania.

We estimate the eight Native American casinos would have $2.078 billion of combined slot and table games revenue.

In total, we project statewide GGR (from a total of 16 pari-mutuel and Native American casinos in Florida) would be $2.808 billion. A summary of this scenario is in the following table:

Figure 40: Scenario H-1 – tables and slots only at Broward/Miami-Dade pari-mutuels, landscape and projections

Florida Casinos	Authorizing pari-mutuel facilities to conduct table games or other Class III games				Compared to Baseline	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	$ Var.	% Var.
# Locations	8	8	0	16	0	0.0%
# Counties	2	6	0	6	0	0.0%
# Slots	8,409	14,564	0	22,973	0	0.0%
# Table Games	250	431	0	681	681	n/a
# Gaming Positions	9,909	17,150	0	27,059	4,086	17.8%
GGR ($M)	$730.4	$2,077.6	$0.0	$2,808.0	$352.3	14.3%
GGR / Position / Day	$202	$332	$0	$284	($9)	-2.9%

Source: Spectrum Gaming Group

Additionally, we project the statewide casino participation rate (i.e., Florida adults visiting Florida casinos) would be 23.1 percent; the rate for adults residing within a one-hour drive of a casino would be 32 percent and 11.8 percent beyond a one-hour drive.

b. Economic/Fiscal Impacts

Next, we determine the economic impacts of these scenarios using the REMI Tax-PI model, using the Default Budget and three different tax rates (see Chapter I[H] for methodology detail). Scenario H-1 includes one year of construction in the first year and does include Compact revenues. The economic impacts rise sharply in the first year which only reflects construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 3,253 and Gross State Product is $264 million under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of $50.2 million under the Default Budget to $52.2 million under the Pennsylvania gaming tax rates.

Figure 41: Scenario H-1, tables and slots only at Broward/Miami-Dade pari-mutuels – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	6,201	3,740	3,441	3,253	3,120	3,030
Gross State Product	$416	$282	$270	$264	$263	$266
Gaming Taxes	$0.02	$1.02	$1.93	$1.86	$1.81	$1.78
Sales/Use Tax	$3.95	$6.40	$4.92	$4.97	$5.07	$5.21
Lottery	$0.51	($1.50)	($3.96)	($3.98)	($3.99)	($4.00)
Compact Revenues	$0.00	$21.86	$44.74	$46.52	$48.02	$49.56
All other Revenues	$2.69	$4.55	$3.77	$3.98	$4.15	$4.30
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,972	2,943	2,933	2,936	3,253	
Gross State Product	$269	$276	$283	$293	$264	
Gaming Taxes	$1.77	$1.76	$1.76	$1.76	$1.86	
Sales/Use Tax	$5.39	$5.61	$5.87	$6.15	$4.97	
Lottery	($4.02)	($4.03)	($4.03)	($4.01)	($3.98)	
Compact Revenues	$51.11	$52.63	$54.14	$55.65	$46.52	
All other Revenues	$4.44	$4.60	$4.76	$4.93	$3.98	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 42: Scenario H-1, tables and slots only at Broward/Miami-Dade pari-mutuels – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	6,200	3,745	3,452	3,268	3,134	3,048
Gross State Product	$417	$282	$270	$266	$265	$267
Gaming Taxes	$0.02	$1.26	$2.50	$2.53	$2.57	$2.63
Sales/Use Tax	$3.95	$6.40	$4.93	$4.98	$5.09	$5.23
Lottery	$0.51	($1.50)	($3.96)	($3.98)	($3.99)	($4.00)
Compact Revenues	$0.00	$21.86	$44.74	$46.52	$48.02	$49.56
All other Revenues	$2.68	$4.55	$3.78	$3.99	$4.17	$4.32
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,990	2,964	2,949	2,953	3,268	
Gross State Product	$271	$278	$285	$295	$266	
Gaming Taxes	$2.69	$2.75	$2.82	$2.89	$2.53	
Sales/Use Tax	$5.42	$5.65	$5.91	$6.19	$4.98	
Lottery	($4.01)	($4.02)	($4.02)	($4.00)	($3.98)	
Compact Revenues	$51.11	$52.63	$54.14	$55.65	$46.52	
All other Revenues	$4.46	$4.62	$4.79	$4.95	$3.99	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 43: Scenario H-1, tables and slots only at Broward/Miami-Dade pari-mutuels – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	6,202	3,739	3,441	3,262	3,131	3,042
Gross State Product	$417	$282	$269	$265	$264	$266
Gaming Taxes	$0.01	$1.00	$1.98	$2.00	$2.03	$2.07
Sales/Use Tax	$3.95	$6.40	$4.92	$4.98	$5.08	$5.22
Lottery	$0.51	($1.50)	($3.96)	($3.98)	($3.99)	($4.00)
Compact Revenues	$0.00	$21.86	$44.74	$46.52	$48.02	$49.56
All other Revenues	$2.68	$4.55	$3.77	$3.99	$4.17	$4.31
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,985	2,954	2,943	2,947	3,262	
Gross State Product	$270	$276	$285	$294	$265	
Gaming Taxes	$2.12	$2.17	$2.22	$2.27	$2.00	
Sales/Use Tax	$5.40	$5.63	$5.89	$6.18	$4.98	
Lottery	($4.02)	($4.02)	($4.02)	($4.01)	($3.98)	
Compact Revenues	$51.11	$52.63	$54.14	$55.65	$46.52	
All other Revenues	$4.46	$4.62	$4.78	$4.95	$3.99	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 44: Scenario H-1, tables and slots only at Broward/Miami-Dade pari-mutuels – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	6,200	3,758	3,478	3,294	3,160	3,072
Gross State Product	$417	$283	$272	$268	$267	$269
Gaming Taxes	$0.03	$1.88	$3.74	$3.79	$3.86	$3.94
Sales/Use Tax	$3.95	$6.41	$4.96	$5.03	$5.14	$5.28
Lottery	$0.51	($1.50)	($3.96)	($3.98)	($3.99)	($4.00)
Compact Revenues	$0.00	$21.86	$44.74	$46.52	$48.02	$49.56
All other Revenues	$2.68	$4.56	$3.80	$4.03	$4.22	$4.37
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	3,017	2,988	2,973	2,977	3,294	
Gross State Product	$273	$280	$288	$297	$268	
Gaming Taxes	$4.04	$4.14	$4.24	$4.35	$3.79	
Sales/Use Tax	$5.48	$5.71	$5.97	$6.25	$5.03	
Lottery	($4.01)	($4.02)	($4.02)	($4.00)	($3.98)	
Compact Revenues	$51.11	$52.63	$54.14	$55.65	$46.52	
All other Revenues	$4.53	$4.69	$4.86	$5.03	$4.03	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Under this scenario, we believe it is reasonable to expect the addition of table games at eight pari-mutuels in Miami-Dade and Broward counties would lead to these locations having net direct employment of 5,185 FTEs. Under this scenario, we project Florida's 16 casinos would yield net direct employment of 14,155 FTEs.

c. GGR and Related Projections (with Option to End Pari-Mutuel Live Events)

In this sub-scenario, pari-mutuel facilities would be permitted to end live performances, with supplementation of horse purses and awards calculated as percentage of statewide GGR, rather than by facility.

GGR projections (to determine fiscal impacts) for this scenario mimic our projections per Scenario H-1, whereby only pari-mutuel locations in Miami-Dade and Broward counties would add table games (and none of the 20 pari-mutuels outside of Miami-Dade and Broward counties would have slots or tables, only cardrooms). However, in addition to aforementioned revenue-due-to-the-State figures, we project $31.2 million would need to be generated for purse subsidies. Applying a uniform rate applicable to total GGR at all casinos in Florida (net of Native American operations), the rate to generate such purse subsidies would be 4.27 percent under this scenario; however, this rate would be 4.67 percent based on taxable GGR.

d. Economic/Fiscal Impacts (with Option to End Pari-Mutuel Live Events)

Next, we determine the economic impacts of this scenario using the REMI Tax-PI model, using the Default Budget and three different tax rates. (See Chapter I[H] for methodology detail.) This combination scenario captures the effects of a reduction in live racing in addition to the changes introduced in Scenario H. This scenario includes one year of construction in the first year and does include Compact revenues. The economic impacts rise sharply in the first year which only reflects construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 2,803 and Gross State Product is $256 million under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of $49.1 million under the Default Budget to $51.1 million under the Pennsylvania gaming tax rates.

Figure 45: Scenario H-2, table games at Broward/Miami-Dade pari-mutuels and reduction in pari-mutuel events – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	5,728	3,272	2,980	2,803	2,678	2,590
Gross State Product	$408	$273	$260	$256	$255	$257
Gaming Taxes	($0.01)	$0.96	$1.87	$1.80	$1.75	$1.73
Sales/Use Tax	$3.72	$5.90	$4.36	$4.36	$4.42	$4.51
Lottery	$0.49	($1.54)	($3.99)	($4.01)	($4.01)	($4.02)
Compact Revenues	$0.00	$21.86	$44.74	$46.52	$48.02	$49.56
All other Revenues	$2.62	$4.35	$3.47	$3.60	$3.73	$3.82
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,538	2,511	2,500	2,507	2,803	
Gross State Product	$261	$268	$275	$284	$256	
Gaming Taxes	$1.71	$1.71	$1.71	$1.71	$1.80	
Sales/Use Tax	$4.65	$4.84	$5.05	$5.29	$4.36	
Lottery	($4.03)	($4.04)	($4.04)	($4.02)	($4.01)	
Compact Revenues	$51.11	$52.63	$54.14	$55.65	$46.52	
All other Revenues	$3.93	$4.05	$4.18	$4.32	$3.60	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 46: Scenario H-2, table games at Broward/Miami-Dade pari-mutuels and reduction in pari-mutuel events – economic impacts using Florida pari-mutuel gaming tax rate.

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	5,726	3,275	2,991	2,815	2,688	2,609
Gross State Product	$408	$273	$261	$257	$256	$259
Gaming Taxes	$0.00	$1.23	$2.47	$2.50	$2.54	$2.59
Sales/Use Tax	$3.72	$5.91	$4.38	$4.38	$4.44	$4.55
Lottery	$0.49	($1.54)	($3.99)	($4.01)	($4.01)	($4.02)
Compact Revenues	$0.00	$21.86	$44.74	$46.52	$48.02	$49.56
All other Revenues	$2.62	$4.35	$3.49	$3.62	$3.75	$3.85
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,556	2,528	2,519	2,524	2,815	
Gross State Product	$262	$269	$277	$286	$257	
Gaming Taxes	$2.65	$2.72	$2.78	$2.85	$2.50	
Sales/Use Tax	$4.69	$4.88	$5.10	$5.33	$4.38	
Lottery	($4.03)	($4.03)	($4.03)	($4.02)	($4.01)	
Compact Revenues	$51.11	$52.63	$54.14	$55.65	$46.52	
All other Revenues	$3.96	$4.08	$4.21	$4.35	$3.62	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 47: Scenario H-2, table games at Broward/Miami-Dade pari-mutuels and reduction in pari-mutuel events – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	5,730	3,269	2,980	2,809	2,684	2,604
Gross State Product	$408	$272	$260	$256	$256	$258
Gaming Taxes	$0.00	$0.98	$1.96	$1.98	$2.01	$2.05
Sales/Use Tax	$3.72	$5.91	$4.36	$4.37	$4.43	$4.54
Lottery	$0.49	($1.54)	($3.99)	($4.01)	($4.01)	($4.02)
Compact Revenues	$0.00	$21.86	$44.74	$46.52	$48.02	$49.56
All other Revenues	$2.62	$4.35	$3.47	$3.62	$3.74	$3.84
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,552	2,526	2,516	2,521	2,809	
Gross State Product	$262	$268	$277	$286	$256	
Gaming Taxes	$2.09	$2.14	$2.19	$2.24	$1.98	
Sales/Use Tax	$4.68	$4.87	$5.09	$5.33	$4.37	
Lottery	($4.03)	($4.04)	($4.04)	($4.02)	($4.01)	
Compact Revenues	$51.11	$52.63	$54.14	$55.65	$46.52	
All other Revenues	$3.96	$4.08	$4.22	$4.37	$3.62	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 48: Scenario H-2, table games at Broward/Miami-Dade pari-mutuels and reduction in pari-mutuel events – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	5,727	3,287	3,016	2,841	2,717	2,636
Gross State Product	$408	$274	$263	$259	$258	$261
Gaming Taxes	$0.00	$1.84	$3.70	$3.75	$3.82	$3.90
Sales/Use Tax	$3.72	$5.92	$4.40	$4.43	$4.50	$4.60
Lottery	$0.49	($1.54)	($3.99)	($4.00)	($4.01)	($4.01)
Compact Revenues	$0.00	$21.86	$44.74	$46.52	$48.02	$49.56
All other Revenues	$2.62	$4.36	$3.50	$3.67	$3.80	$3.91
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,586	2,561	2,546	2,553	2,841	
Gross State Product	$265	$272	$280	$289	$259	
Gaming Taxes	$3.99	$4.09	$4.19	$4.30	$3.75	
Sales/Use Tax	$4.76	$4.95	$5.17	$5.41	$4.43	
Lottery	($4.03)	($4.03)	($4.03)	($4.01)	($4.00)	
Compact Revenues	$51.11	$52.63	$54.14	$55.65	$46.52	
All other Revenues	$4.03	$4.17	$4.31	$4.46	$3.67	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

3. If All 28 Pari-Mutuels Offered Slots and Table Games

Assumptions under this sub-scenario are consistent with those in Scenario G, in which the salient assumption is there could be 20 additional pari-mutuel casinos outside of Broward and Miami-Dade counties. These 20 locations would have the ability to offer both slots and table games. In addition, we assume all pari-mutuels in Miami-Dade and Broward counties (inclusive Dania Jai-Alai) also would offer both slots and table games.

Under this sub-scenario, and with 20 additional pari-mutuel casinos outside of Miami-Dade and Broward counties, there could be 23 counties with at least one casino versus six counties today.

a. GGR and Related Projections (Minimizing Cannibalization)

Under this sub-scenario, we project a complement of both slots and tables would be economically viable additions at 18 of the 20 pari-mutuels outside of Miami-Dade and Broward counties. We project these 18 pari-mutuels could collectively generate $1.988 billion in GGR annually from 21,240 gaming positions. We project total slot revenue of $1.685 billion from 18,000 slot machines and total table revenue of $303.2 million from 540 table games. Of the 18 locations, the average location would have 1,180 gaming positions (1,000 slots and 30 table games), while the median in our result set is 708 gaming positions (600 slots and 18 table games). Furthermore, eight pari-mutuels would have the minimal amount of gaming positions (500 slots and 15 table games), three locations would warrant 2,000 slots and 60 table games (2,360 gaming positions), per our modeling and assumptions.

We project the eight pari-mutuels in Miami-Dade and Broward counties would generate $718.7 million in GGR, with $609.9 million of gross slot revenue and $108.8 million of total table games revenue. Therefore, under this scenario, there would be 26 pari-mutuels with both slots and table games, which could generate $2.294 billion of gross slot revenue and $412 million of total table games revenue. From this we assume taxable GGR would be $2.477 billion. This level of revenue would result in revenue due to the State as follows:

- $867 million under the current 35 percent tax rate.
- $668.8 million at the US median effective GGR tax rate of 27 percent.
- $1.164 billion at the effective rate(s) in Pennsylvania.

We estimate the eight Native American casinos would have $1.759 billion of combined slot and table games revenue.

In total, we project statewide GGR from a total of 34 pari-mutuel and Native American casinos would be $4.466 billion. A summary of this scenario is in the following table:

Figure 49: Scenario H-3, minimizing cannibalization – slots and tables at pari-mutuels statewide, landscape and projections

Florida Casinos	Authorizing pari-mutuel facilities to conduct table games or other Class III games				*Compared to Baseline*	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	*$ Var.*	*% Var.*
# Locations	26	8	0	34	*18*	*112.5%*
# Counties	18	6	0	21	*15*	*250.0%*
# Slots	26,409	14,564	0	40,973	*18,000*	*78.4%*
# Table Games	790	431	0	1,221	*1,221*	*n/a*
# Gaming Positions	31,149	17,150	0	48,299	*25,326*	*110.2%*
GGR ($M)	$2,706.3	$1,759.2	$0.0	$4,465.5	*$2,009.8*	*81.8%*
GGR / Position / Day	$238	$281	$0	$253	*($40)*	*-13.5%*

Source: Spectrum Gaming Group

Additionally, we project the statewide casino participation rate would be 33.6 percent, while the rate for adults residing within a one-hour drive of a casino would be 36.3 percent and 30 percent for those living beyond a one-hour drive of a casino.

b. Economic/Fiscal Impact (Minimizing Cannibalization)

Next, we determine the economic impacts of these scenarios using the REMI Tax-PI model, using the Default Budget and three different tax rates (see Chapter I[H] for methodology detail). Scenario H-3 includes one year of construction in the first year and does not include Compact revenues. The economic impacts rise sharply in the first year which only reflects construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 10,351 and Gross State Product is $1.19 billion under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of -$69.6 million under the US median gaming tax rates to -$51.5 million under the Default Budget.

Figure 50: Scenario H-3, tables and slots only at pari-mutuels statewide but minimizing cannibalization – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	11,699	10,642	10,588	10,351	10,201	10,145
Gross State Product	$756	$1,136	$1,170	$1,189	$1,216	$1,251
Gaming Taxes	($0.91)	$17.61	$36.16	$36.19	$36.31	$36.66
Sales/Use Tax	$7.14	$12.57	$11.60	$12.73	$13.62	$14.54
Lottery	$6.60	$6.18	($0.99)	($1.25)	($1.43)	($1.60)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$4.50	$11.14	$13.99	$15.87	$17.37	$18.74

At Default Budget	Year 7	Year 8	Year 9	Year 10	Average
Employment	10,132	10,190	10,279	10,423	10,351
Gross State Product	$1,290	$1,336	$1,384	$1,438	$1,189
Gaming Taxes	$37.13	$37.66	$38.13	$38.54	$36.19
Sales/Use Tax	$15.53	$16.60	$17.78	$19.03	$12.73
Lottery	($1.71)	($1.76)	($1.77)	($1.74)	($1.25)
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)
All other Revenues	$20.03	$21.45	$22.80	$24.17	$15.87

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 51: Scenario H-3, tables and slots only at pari-mutuels statewide but minimizing cannibalization – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	11,709	10,469	10,251	10,038	9,913	9,885
Gross State Product	$757	$1,123	$1,143	$1,163	$1,191	$1,228
Gaming Taxes	($0.43)	$8.65	$18.41	$18.95	$19.53	$20.20
Sales/Use Tax	$7.14	$12.45	$11.20	$12.19	$13.08	$14.00
Lottery	$6.60	$6.16	($1.04)	($1.31)	($1.48)	($1.64)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$4.50	$11.05	$13.72	$15.46	$16.93	$18.27

At Florida Pari-Mutuel Gaming Tax Rate	Year 7	Year 8	Year 9	Year 10	Average
Employment	9,897	9,971	10,075	10,233	10,038
Gross State Product	$1,269	$1,315	$1,364	$1,419	$1,163
Gaming Taxes	$20.89	$21.61	$22.34	$23.08	$18.95
Sales/Use Tax	$14.99	$16.07	$17.25	$18.50	$12.19
Lottery	($1.74)	($1.79)	($1.80)	($1.77)	($1.31)
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)
All other Revenues	$19.56	$20.98	$22.33	$23.72	$15.46

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 52: Scenario H-3, tables and slots only at pari-mutuels statewide but minimizing cannibalization – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	11,712	10,440	10,193	9,981	9,860	9,831
Gross State Product	$757	$1,121	$1,138	$1,159	$1,187	$1,223
Gaming Taxes	($0.36)	$7.14	$15.18	$15.57	$16.01	$16.53
Sales/Use Tax	$7.14	$12.43	$11.14	$12.10	$12.98	$13.89
Lottery	$6.60	$6.16	($1.04)	($1.32)	($1.49)	($1.65)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$4.50	$11.04	$13.68	$15.40	$16.85	$18.19
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	9,841	9,916	10,020	10,181	9,981	
Gross State Product	$1,263	$1,309	$1,359	$1,414	$1,159	
Gaming Taxes	$17.06	$17.62	$18.20	$18.77	$15.57	
Sales/Use Tax	$14.88	$15.96	$17.12	$18.38	$12.10	
Lottery	($1.75)	($1.80)	($1.81)	($1.78)	($1.32)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$19.47	$20.89	$22.23	$23.61	$15.40	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 53: Scenario H-3, tables and slots only at pari-mutuels statewide but minimizing cannibalization – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	11,706	10,538	10,401	10,187	10,065	10,032
Gross State Product	$757	$1,128	$1,155	$1,176	$1,204	$1,240
Gaming Taxes	($0.60)	$12.24	$26.10	$26.97	$27.89	$28.91
Sales/Use Tax	$7.14	$12.50	$11.37	$12.44	$13.36	$14.29
Lottery	$6.60	$6.17	($1.01)	($1.28)	($1.45)	($1.62)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$4.50	$11.09	$13.84	$15.66	$17.17	$18.54
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	10,040	10,111	10,216	10,374	10,187	
Gross State Product	$1,282	$1,328	$1,378	$1,433	$1,176	
Gaming Taxes	$29.98	$31.07	$32.19	$33.31	$26.97	
Sales/Use Tax	$15.31	$16.40	$17.60	$18.88	$12.44	
Lottery	($1.72)	($1.77)	($1.78)	($1.75)	($1.28)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$19.85	$21.29	$22.66	$24.06	$15.66	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

An additional 18 pari-mutuels outside of Miami-Dade and Broward counties would yield another $36 million in license fees and $4.5 million in regulatory fees.

Under this scenario, we believe it is reasonable to expect the additional 18 pari-mutuel casinos throughout Florida would have net direct employment of 11,123 FTEs statewide. Under this scenario, we project a total of 34 casinos statewide would result in net direct employment of 23,984 FTEs.

c. GGR and Related Projections (Maximizing GGR)

In contrast to the previous sub-scenario in which the objective was to minimize cannibalization of GGR to existing casinos, under this scenario, we assume the seven pari-mutuel operators outside of Miami-Dade and Broward counties and within a one-hour drive of an existing Florida casino could have more than 500 slot machines.

Under this scenario, we project that a complement of both slots and tables would be economically viable for at least 18 of the 20 pari-mutuels outside of Miami-Dade and Broward counties. We project these 18 pari-mutuels could collectively generate $2.361 billion in GGR annually from 29,736 gaming positions. We project total slot revenue of $2 billion from 25,200 slot machines and total table revenue of $360.1 million from 756 table games. Of the 18 locations, the average location would have 1,652 gaming positions (1,400 slots and 42 table games), while the median in our result set is 1,711 gaming positions (1,450 slots and 43.5 table games). Furthermore, one location would have the minimal amount of gaming positions (500 slots and 15 table games), 14 locations would have in excess of 1,000 slots and 30 table games, and at least four locations would warrant 2,000 slots and 60 table games (2,360 gaming positions), per our modeling and assumptions utilized.

We project the eight pari-mutuels in Miami-Dade and Broward counties would generate $685.2 million in GGR, with $581.4 million of gross slot revenue and $103.8 million of table games revenue. Therefore, under this scenario, there would be 26 pari-mutuels with both slots and table games that could generate $2.582 billion of gross slot revenue and $463.9 million of table games revenue. From this, we assume taxable GGR would be $2.788 billion. This level of revenue would result in revenue due to the State as follows:

- $975.7 million under the current 35 percent tax rate.
- $752.7 million at the US median effective GGR tax rate of 27 percent.
- $1.311 billion at the effective rate(s) in Pennsylvania.

We estimate the eight Native American casinos would have $1.42 billion of combined slot and table games revenue.

In total, we project statewide GGR (from a total of 34 pari-mutuel and Native American casinos in Florida) would be $4.466 billion. A summary of this scenario is in the following table:

Figure 54: Scenario H-4, maximizing gaming revenue – slots and tables at pari-mutuels statewide, landscape and projections

Florida Casinos	Authorizing pari-mutuel facilities to conduct table games or other Class III games				*Compared to Baseline*	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	*$ Var.*	*% Var.*
# Locations	26	8	0	34	*18*	*112.5%*
# Counties	18	6	0	21	*15*	*250.0%*
# Slots	33,609	14,564	0	48,173	*25,200*	*109.7%*
# Table Games	1,006	431	0	1,437	*1,437*	*n/a*
# Gaming Positions	39,645	17,150	0	56,795	*33,822*	*147.2%*
GGR ($M)	$3,045.9	$1,419.7	$0.0	$4,465.5	*$2,009.8*	*81.8%*
GGR / Position / Day	$210	$227	$0	$215	*($77)*	*-26.4%*

Source: Spectrum Gaming Group

Additionally, we project the statewide casino participation rate (i.e., Florida adults visiting Florida casinos) would be 33.6 percent, while this rate for adults residing within a one-hour drive of a casino would be 36.3 percent and the rate would be 30 percent for those living beyond a one-hour drive of a casino.

d. Economic/Fiscal Impacts (Maximizing GGR)

Next, we determine the economic impacts of these scenarios using the REMI Tax-PI model, using the Default Budget and three different tax rates (see Chapter I[H] for methodology detail). Scenario H-4 includes one year of construction in the first year and does not include Compact revenues. The economic impacts rise sharply in the first year which only reflects construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 13,941 and Gross State Product is $1.26 billion under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of -$60.5 million under the US median gaming tax rates to -$37.9 million under the Default Budget.

Figure 55: Scenario H-4, tables and slots only at pari-mutuels statewide and maximizing GGR – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	11,699	14,258	14,249	13,941	13,717	13,598
Gross State Product	$756	$1,196	$1,238	$1,256	$1,279	$1,312
Gaming Taxes	($0.91)	$20.76	$42.31	$42.32	$42.44	$42.84
Sales/Use Tax	$7.14	$14.34	$15.48	$17.16	$18.46	$19.71
Lottery	$6.60	$6.35	($0.67)	($0.98)	($1.20)	($1.41)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$4.50	$12.23	$16.55	$19.30	$21.39	$23.24
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	13,537	13,558	13,623	13,753	13,941	
Gross State Product	$1,348	$1,393	$1,441	$1,496	$1,256	
Gaming Taxes	$43.37	$43.98	$44.52	$44.99	$42.32	
Sales/Use Tax	$21.03	$22.43	$23.95	$25.54	$17.16	
Lottery	($1.55)	($1.62)	($1.65)	($1.64)	($0.98)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$24.94	$26.71	$28.38	$30.04	$19.30	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 56: Scenario H-4, tables and slots only at pari-mutuels statewide and maximizing GGR – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	11,709	14,032	13,820	13,543	13,351	13,264
Gross State Product	$757	$1,179	$1,204	$1,223	$1,248	$1,282
Gaming Taxes	($0.43)	$9.28	$19.69	$20.25	$20.88	$21.59
Sales/Use Tax	$7.14	$14.19	$14.99	$16.49	$17.77	$19.02
Lottery	$6.60	$6.33	($0.73)	($1.05)	($1.27)	($1.47)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$4.50	$12.12	$16.20	$18.79	$20.83	$22.65
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	13,229	13,269	13,353	13,504	13,543	
Gross State Product	$1,320	$1,366	$1,415	$1,471	$1,223	
Gaming Taxes	$22.34	$23.11	$23.91	$24.70	$20.25	
Sales/Use Tax	$20.34	$21.75	$23.27	$24.86	$16.49	
Lottery	($1.60)	($1.67)	($1.69)	($1.67)	($1.05)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$24.33	$26.10	$27.76	$29.43	$18.79	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 57: Scenario H-4, tables and slots only at pari-mutuels statewide and maximizing GGR – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	11,712	14,005	13,759	13,483	13,294	13,209
Gross State Product	$757	$1,177	$1,199	$1,218	$1,243	$1,277
Gaming Taxes	($0.36)	$7.71	$16.33	$16.74	$17.21	$17.76
Sales/Use Tax	$7.14	$14.16	$14.91	$16.39	$17.66	$18.91
Lottery	$6.60	$6.33	($0.73)	($1.06)	($1.28)	($1.48)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$4.50	$12.11	$16.16	$18.72	$20.75	$22.56
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	13,174	13,216	13,303	13,452	13,483	
Gross State Product	$1,316	$1,361	$1,410	$1,466	$1,218	
Gaming Taxes	$18.34	$18.95	$19.56	$20.18	$16.74	
Sales/Use Tax	$20.23	$21.64	$23.14	$24.73	$16.39	
Lottery	($1.61)	($1.67)	($1.70)	($1.68)	($1.06)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$24.25	$26.01	$27.67	$29.34	$18.72	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 58: Scenario H-4, tables and slots only at pari-mutuels statewide and maximizing GGR – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	11,706	14,106	13,973	13,696	13,501	13,415
Gross State Product	$757	$1,184	$1,216	$1,236	$1,261	$1,295
Gaming Taxes	($0.60)	$13.01	$27.68	$28.60	$29.59	$30.69
Sales/Use Tax	$7.14	$14.24	$15.15	$16.74	$18.04	$19.31
Lottery	$6.60	$6.34	($0.71)	($1.02)	($1.24)	($1.44)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$4.50	$12.16	$16.33	$18.99	$21.07	$22.91
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	13,378	13,419	13,500	13,648	13,696	
Gross State Product	$1,334	$1,380	$1,429	$1,485	$1,236	
Gaming Taxes	$31.83	$33.01	$34.22	$35.44	$28.60	
Sales/Use Tax	$20.66	$22.09	$23.62	$25.23	$16.74	
Lottery	($1.58)	($1.64)	($1.67)	($1.65)	($1.02)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$24.63	$26.42	$28.11	$29.79	$18.99	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

An additional 18 pari-mutuels outside of Miami-Dade and Broward counties would yield another $36 million in license fees and $4.5 million in regulatory fees.

Under this scenario, we believe it is reasonable to expect the additional 18 pari-mutuel casinos throughout Florida would have net direct employment of 15,572 FTEs statewide. Under this scenario, we project a total of 34 casinos statewide would result in net direct employment of 26,710 FTEs.

I. Scenario I: Authorizing Limited Number of Casino Resorts in Broward/ Miami-Dade

The salient assumption under this scenario is there would be two destination resorts operating in Florida – one in Miami-Dade County and one in Broward County. Aside from the addition of two destination resorts, the remainder of the Florida casino landscape reflects current law/current administration (and inclusive of the assumed 2014 opening of Dania Jai-Alai), albeit with the addition of table games that may include roulette and craps games at all seven Seminole casinos. Exclusive of the addition of destination resorts, these assumptions are consistent, and have the same exceptions and exclusions, with the assumptions described in scenario A and B.

Under this scenario, we estimate there will be 30,573 slot machines and 831 table games (and 35,559 gaming positions) at 18 casinos. Assuming existing casinos do not add or subtract gaming positions from their counts as of June 30, 2013, under this scenario, Broward and Miami-Dade counties would have 77.9 percent of the total statewide gaming positions and Hillsborough County would have 16.5 percent, meaning casinos in three counties would have 94.4 percent of the statewide gaming positions. There still would be six counties in Florida with one or more casinos, as Miami-Dade and Broward counties would be home to 14 casinos.

1. Implications and Considerations

It is our understanding that if this scenario were implemented, revenue sharing per the Seminole Compact would be impacted. Specifically, revenue sharing would exclude net win generated at the Seminole Tribe's Broward County facilities. Additionally, the Seminole Tribe's Brighton and Big Cypress location would be authorized to conduct table games.

Destination resort gaming restricted to Broward and Miami-Dade could provide a desirable combination of economic benefits via expansion while minimizing the negative consequences because gaming already is prominent in South Florida. Such resorts could place Florida in the "major leagues" of casino gambling. Depending on the quality, location and marketing of the destination resort(s), the state could immediately become a major international competitor for the ultra-high-end traveler who includes casino gambling as part of his/her entertainment experience. In this regard, Florida could compete with Las Vegas, Macau and other world-class casino markets for the highest-stakes players.

Destination resorts can also leverage the existing natural resources (ocean and beaches) and the state's considerable tourism infrastructure.

Spectrum first studied the concept of adding destination resorts in Florida in 2011, under contract with potential private operators. Our findings then were consistent with what we have reported here. Back then, we determined that three destinations in the Miami-Dade and Broward areas could generate annual GGR between $1.67 billion and $2.17 billion. We then had the benefit of identifying and examining specific marketing plans that would focus in certain geographic and demographic areas, including aggressive marketing and junket plans for Asian and Latin American gamblers, as well as for gamblers visiting other US destinations, including Atlantic City and Las Vegas. With those marketing plans in mind, the potential revenues more than doubled to an effective range of between $4.3 billion to $5.9 billion. These projections were consistent with projections developed by another consulting firm, Union Gaming Analytics, which vetted our projections.[74]

We cannot assume that such aggressive marketing plans would be in place – or that potential developers would have the wherewithal to execute on such plans – for purposes of these scenarios, but we note that skilled operators, armed with sufficient assets and optimal locations, can significantly grow gaming and non-gaming revenues.

The location and breadth of non-gaming amenities in such destination resorts, however, could pose threats to existing restaurants, hotels and entertainment options – particularly if the resorts failed to attract incremental out-of-market visitors (i.e., where destination resorts simply cannibalize discretionary spending already destined for existing Florida businesses).

Destination resorts also could threaten existing pari-mutuel slot operations. Although the current pari-mutuel slot patrons are viewed as neighborhood-loyal and convenience-driven in terms of choosing "their" place to participate in gaming activities, the impact of authorizing a destination resort in Broward County east of Interstate 95 could negatively impact the Mardi Gras and Gulfstream slot operations. The opportunity for a higher-quality gaming facility – along with the opportunity to earn player rewards such as hotel stays, gourmet meals and show tickets – could be an incentive influencing the switching behavior of some patrons.

The authorizing of casino resort style gaming could be an immediate competitive threat to the Seminole-owned casinos, which could result in those properties providing a lower-cost experience for their patrons – both locals and prospective visitors. It also could prompt their properties to further improve/expand their offerings to compete with the big-box resorts. Such responses by the Seminole casinos, however, also could place further pressure on the existing pari-mutuels.

[74] Resorts World America/Genting press release, November 16, 2011; http://www.rwmiami.com/images/News/press-releases/SpectrumUnionPressRelease.pdf.

From a qualitative perspective, adding destination resort gambling could change visitor perceptions regarding Florida's family-friendly image.

2. GGR and Related Projections

Under this scenario, we project two destination resorts could collectively generate $1.056 billion in GGR annually from 10,000 gaming positions. We project total slot revenue of $802.4 million from 7,600 slot machines and total table revenue of $253.4 million from 400 table games. Additionally, we project gross non-gaming revenue of $480.5 million stemming from on-site hotel rooms/related, food and beverage, as well as from other non-gaming activities at two resorts ($240.2 million annually per location).

We project the eight pari-mutuels in Miami-Dade and Broward counties would generate $389.7 million of gross slot revenue – a 39.9 percent reduction in GGR from the Baseline scenario. Additionally, under this scenario and with the current number of slot machines by location, the range in daily win per slot would be $86 to $152 – so some locations may no longer be economically viable and/or may have to reduce the number of slot machines to match the reduction in demand.

Combined, we project the two destination resorts and eight pari-mutuels in Miami-Dade and Broward counties could generate $1.446 billion in GGR, with $1.192 billion of gross slot revenue and $253.4 million of total table games revenue. From this, we assume taxable GGR would be $1.326 billion. This level of revenue would result in revenue due to the State as follows:

- $464.2 million under the current 35 percent tax rate.
- $358.1 million at the US median effective GGR tax rate of 27 percent.
- $609.8 million at the effective rate(s) in Pennsylvania.

We estimate the eight Native American casinos would have $1.75 billion of combined slot and table games revenue.

In total, we project statewide GGR from a total combination of 18 pari-mutuel, Native American, and destination resort casinos would be $3.195 billion. A summary of this scenario:

Figure 59: Scenario I - Authorizing Casino Resorts in Broward/Miami-Dade, landscape and projections

Florida Casinos	Authorizing two destination resorts in Miami-Dade and/or Broward counties				*Compared to Baseline*	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	*$ Var.*	*% Var.*
# Locations	8	8	2	18	*2*	*12.5%*
# Counties	2	6	2	6	*0*	*0.0%*
# Slots	8,409	14,564	7,600	30,573	*7,600*	*33.1%*
# Table Games	0	431	400	831	*831*	*n/a*
# Gaming Positions	8,409	17,150	10,000	35,559	*12,586*	*54.8%*
GGR ($M)	$389.7	$1,749.5	$1,055.7	$3,195.0	*$739.2*	*30.1%*
GGR / Position / Day	$127	$279	$289	$246	*($47)*	*-15.9%*

Source: Spectrum Gaming Group

Additionally, we project the statewide casino participation rate (i.e., Florida adults visiting Florida casinos) would be 23.1 percent; the rate for adults residing within a one-hour drive of a casino would be 32 percent and the rate would be 11.8 percent for beyond a one-hour drive.

3. Economic/Fiscal Impacts

Next, we determine the economic impacts of this scenario using the REMI Tax-PI model, using the Default Budget and three different tax rates (see Chapter I[H] for methodology detail). Scenario I includes three years of construction starting in the first year and does include Compact revenues. The economic impacts rise sharply in the first years which only reflect construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 2,737 and Gross State Product is $586 million under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of -$51.6 million under the Default Budget to -$41 million under the Pennsylvania gaming tax rates.

Figure 60: Scenario I, casino resorts in Broward/Miami-Dade – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	18,453	17,928	16,898	2,737	2,204	2,225
Gross State Product	$1,239	$1,252	$1,221	$586	$551	$564
Gaming Taxes	$0.04	$0.10	$0.10	($2.84)	($5.60)	($5.54)
Sales/Use Tax	$11.75	$24.59	$26.16	$16.96	$6.52	$5.48
Lottery	$1.52	$2.93	$2.58	$1.36	$0.43	$0.59
Compact Revenues	$0.00	$0.00	$0.00	($46.91)	($96.30)	($101.31)
All other Revenues	$7.99	$18.29	$20.96	$14.71	$7.17	$5.57

At Default Budget	Year 7	Year 8	Year 9	Year 10	Average
Employment	2,403	2,655	2,925	3,208	2,737
Gross State Product	$595	$635	$679	$726	$586
Gaming Taxes	($5.52)	($5.52)	($5.53)	($5.53)	($2.84)
Sales/Use Tax	$5.16	$5.23	$5.56	$6.07	$16.96
Lottery	$0.77	$0.98	$1.17	$1.37	$1.36
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($46.91)
All other Revenues	$4.74	$4.32	$4.18	$4.25	$14.71

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 61: Scenario I, casino resorts in Broward/Miami-Dade – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	18,450	17,927	16,898	2,840	2,398	2,418
Gross State Product	$1,240	$1,252	$1,220	$595	$568	$581
Gaming Taxes	$0.05	$0.11	$0.11	$2.85	$5.68	$5.87
Sales/Use Tax	$11.75	$24.59	$26.15	$17.03	$6.75	$5.81
Lottery	$1.52	$2.93	$2.58	$1.37	$0.46	$0.62
Compact Revenues	$0.00	$0.00	$0.00	($46.91)	($96.30)	($101.31)
All other Revenues	$7.98	$18.29	$20.96	$14.77	$7.34	$5.82
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,590	2,834	3,097	3,370	2,840	
Gross State Product	$612	$652	$695	$743	$595	
Gaming Taxes	$6.07	$6.26	$6.45	$6.64	$2.85	
Sales/Use Tax	$5.53	$5.63	$5.97	$6.48	$17.03	
Lottery	$0.81	$1.00	$1.20	$1.40	$1.37	
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($46.91)	
All other Revenues	$5.03	$4.64	$4.52	$4.61	$14.77	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 62: Scenario I, casino resorts in Broward/Miami-Dade – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	18,454	17,930	16,899	2,830	2,380	2,399
Gross State Product	$1,240	$1,253	$1,221	$594	$566	$579
Gaming Taxes	$0.04	$0.08	$0.09	$2.13	$4.23	$4.38
Sales/Use Tax	$11.75	$24.59	$26.16	$17.03	$6.73	$5.78
Lottery	$1.52	$2.93	$2.59	$1.37	$0.46	$0.62
Compact Revenues	$0.00	$0.00	$0.00	($46.91)	($96.30)	($101.31)
All other Revenues	$7.99	$18.30	$20.96	$14.77	$7.33	$5.80
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,567	2,812	3,072	3,350	2,830	
Gross State Product	$609	$649	$693	$741	$594	
Gaming Taxes	$4.54	$4.69	$4.84	$4.99	$2.13	
Sales/Use Tax	$5.49	$5.58	$5.91	$6.43	$17.03	
Lottery	$0.80	$1.00	$1.19	$1.39	$1.37	
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($46.91)	
All other Revenues	$5.01	$4.61	$4.49	$4.57	$14.77	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 63: Scenario I, casino resorts in Broward/Miami-Dade – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	18,452	17,930	16,903	2,875	2,466	2,483
Gross State Product	$1,240	$1,252	$1,221	$598	$573	$587
Gaming Taxes	$0.07	$0.16	$0.17	$4.57	$9.11	$9.40
Sales/Use Tax	$11.75	$24.59	$26.16	$17.06	$6.84	$5.94
Lottery	$1.52	$2.93	$2.59	$1.38	$0.47	$0.63
Compact Revenues	$0.00	$0.00	$0.00	($46.91)	($96.30)	($101.31)
All other Revenues	$7.99	$18.29	$20.96	$14.80	$7.41	$5.92
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,650	2,897	3,155	3,424	2,875	
Gross State Product	$617	$657	$701	$748	$598	
Gaming Taxes	$9.69	$9.99	$10.29	$10.58	$4.57	
Sales/Use Tax	$5.66	$5.76	$6.11	$6.62	$17.06	
Lottery	$0.82	$1.01	$1.21	$1.41	$1.38	
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($46.91)	
All other Revenues	$5.14	$4.76	$4.65	$4.73	$14.80	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Under this scenario, we believe it is reasonable to expect the creation/addition of two destination resorts in southern Florida would result in net, direct employment of 7,618 FTEs. Under this scenario, we project Florida's 16 casinos would yield net direct employment of 17,806 FTEs.

4. GGR and Related Projections (with Option to End Pari-Mutuel Live Events)

In this sub-scenario, pari-mutuel facilities would be permitted to end live performances, with supplementation of horse purses and awards calculated as percentage of statewide GGR, rather than by facility.

GGR projections (to determine fiscal impacts) for this scenario mimic our projections per Scenario I. However, in addition to aforementioned revenue-due-to-the-State figures, we project $31.2 million would need to be generated for purse subsidies. Applying a uniform rate applicable to total GGR at all casinos in Florida (net of Native American operations), the rate to generate such purse subsidies would be 2.16 percent under this scenario; however, this rate would be 2.35 percent based on taxable GGR.

5. Economic/Fiscal Impacts (with Option to End Pari-Mutuel Live Events)

Next, we determine the economic impacts of this scenario using the REMI Tax-PI model, using the Default Budget. (See Chapter I[H] for methodology detail.) This combination scenario captures the effects of a reduction in live racing in addition to the changes introduced in Scenario I. This scenario includes three years of construction starting in the first year and does include Compact revenues. The economic impacts rise sharply in the first years which only reflect construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 2,285 and Gross State Product is $578 million under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of -$52.7 million under the Default Budget to -$42.1 million under the Pennsylvania gaming tax rates.

Figure 64: Scenario I-1, two destination resorts in Broward/Miami-Dade and reduction in pari-mutuel events – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	17,980	17,458	16,437	2,285	1,760	1,787
Gross State Product	$1,231	$1,243	$1,212	$578	$542	$556
Gaming Taxes	$0.02	$0.04	$0.05	($2.90)	($5.65)	($5.59)
Sales/Use Tax	$11.52	$24.09	$25.60	$16.35	$5.87	$4.80
Lottery	$1.50	$2.89	$2.55	$1.34	$0.41	$0.57
Compact Revenues	$0.00	$0.00	$0.00	($46.91)	($96.30)	($101.31)
All other Revenues	$7.92	$18.09	$20.66	$14.34	$6.75	$5.11
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	1,970	2,226	2,495	2,777	2,285	
Gross State Product	$586	$626	$670	$718	$578	
Gaming Taxes	($5.57)	($5.58)	($5.58)	($5.58)	($2.90)	
Sales/Use Tax	$4.44	$4.47	$4.75	$5.22	$16.35	
Lottery	$0.76	$0.96	$1.16	$1.36	$1.34	
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($46.91)	
All other Revenues	$4.24	$3.79	$3.63	$3.66	$14.34	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 65: Scenario I-1, two destination resorts in Broward/Miami-Dade and reduction in pari-mutuel events – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	17,981	17,457	16,436	2,386	1,956	1,981
Gross State Product	$1,231	$1,243	$1,212	$586	$559	$573
Gaming Taxes	$0.04	$0.08	$0.08	$2.82	$5.65	$5.84
Sales/Use Tax	$11.52	$24.09	$25.59	$16.42	$6.10	$5.13
Lottery	$1.50	$2.89	$2.55	$1.35	$0.44	$0.60
Compact Revenues	$0.00	$0.00	$0.00	($46.91)	($96.30)	($101.31)
All other Revenues	$7.92	$18.09	$20.66	$14.39	$6.91	$5.35
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,155	2,400	2,663	2,940	2,386	
Gross State Product	$603	$643	$686	$734	$586	
Gaming Taxes	$6.03	$6.23	$6.42	$6.61	$2.82	
Sales/Use Tax	$4.80	$4.85	$5.15	$5.61	$16.42	
Lottery	$0.79	$0.99	$1.18	$1.38	$1.35	
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($46.91)	
All other Revenues	$4.52	$4.10	$3.95	$4.00	$14.39	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 66: Scenario I-1, two destination resorts in Broward/Miami-Dade and reduction in pari-mutuel events – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	17,982	17,460	16,438	2,378	1,939	1,961
Gross State Product	$1,231	$1,244	$1,212	$585	$558	$571
Gaming Taxes	$0.03	$0.06	$0.06	$2.10	$4.21	$4.36
Sales/Use Tax	$11.52	$24.09	$25.60	$16.42	$6.09	$5.10
Lottery	$1.50	$2.89	$2.55	$1.35	$0.44	$0.60
Compact Revenues	$0.00	$0.00	$0.00	($46.91)	($96.30)	($101.31)
All other Revenues	$7.92	$18.09	$20.67	$14.40	$6.90	$5.34
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,132	2,379	2,643	2,919	2,378	
Gross State Product	$601	$641	$685	$732	$585	
Gaming Taxes	$4.51	$4.66	$4.81	$4.96	$2.10	
Sales/Use Tax	$4.76	$4.81	$5.10	$5.57	$16.42	
Lottery	$0.79	$0.99	$1.18	$1.38	$1.35	
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($46.91)	
All other Revenues	$4.50	$4.07	$3.92	$3.97	$14.40	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 67: Scenario I-1, two destination resorts in Broward/Miami-Dade and reduction in pari-mutuel events – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	17,979	17,459	16,439	2,423	2,021	2,041
Gross State Product	$1,231	$1,243	$1,212	$590	$564	$578
Gaming Taxes	$0.05	$0.12	$0.12	$4.52	$9.06	$9.35
Sales/Use Tax	$11.52	$24.10	$25.60	$16.46	$6.20	$5.24
Lottery	$1.50	$2.89	$2.55	$1.35	$0.45	$0.61
Compact Revenues	$0.00	$0.00	$0.00	($46.91)	($96.30)	($101.31)
All other Revenues	$7.92	$18.09	$20.66	$14.42	$6.97	$5.44
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	2,214	2,462	2,720	2,992	2,423	
Gross State Product	$609	$649	$693	$739	$590	
Gaming Taxes	$9.65	$9.95	$10.24	$10.53	$4.52	
Sales/Use Tax	$4.93	$4.98	$5.27	$5.75	$16.46	
Lottery	$0.80	$1.00	$1.19	$1.39	$1.35	
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($46.91)	
All other Revenues	$4.62	$4.20	$4.06	$4.11	$14.42	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

J. Scenario J: Authorizing Limited Number of Casino Resorts Statewide

The salient assumption under this scenario is there would be a total of six destination resorts operating in Florida. Based on the same exceptions and exclusions described in Scenario I above, we continue to assume two destination resorts will be located in southern Florida (one in Miami-Dade County and one in Broward County) – as these two counties are home to more than one out of every five Florida residents.

Of the remaining (and assumed) four destination resorts in Florida, we assume one destination resort will be located in each of the top four most-populated MSAs (inclusive of the Miami-Fort Lauderdale-West Palm Beach MSA), as follows:

- We assume one additional destination resort in the Miami-Fort Lauderdale-West Palm Beach MSA would be located within Palm Beach County (which would mean, of the three destination resorts within this MSA, there would be one in each of the counties comprising the MSA).
- Of the remaining (and assumed) three destination resorts in Florida, we assume one destination resort will be located in each of the next three most-populated MSAs, in or around Tampa, Orlando and Jacksonville, respectively.

Under this scenario, we estimate there will be 45,773 slot machines and 1,631 table games (and 55,559 gaming positions) at 22 casinos throughout Florida. Assuming existing casinos do not add or subtract gaming positions from their counts as of June 30, 2013, under this scenario, Broward and Miami-Dade counties would have 49.9 percent of the total statewide gaming positions and Hillsborough County would have 19.6 percent, meaning casinos in three counties would have 69.5 percent of the statewide gaming positions. Under this scenario, there would be nine counties in Florida with one or more casinos, as there would be multiple casinos in Hillsborough, Miami-Dade and Broward counties.

Currently, of the existing 15 casinos, 56 percent of Florida adults are within a one-hour drive of a Florida casino, while 81.4 percent are within a two-hour drive. However, with six destination resorts throughout the state, 80 percent of Florida adults would be within a one-hour drive of Florida casino, while 92 percent would be within a two-hour drive. To put it another way, nearly 3.45 million more Florida adults would be within a one-hour drive of a Florida casino under such expansion (from 8.1 million adults currently to 11.6 million adults with 22 casinos statewide).

There are no out-of-state adults (i.e., non-Floridians) within a one- or two-hour drive of an existing Florida casino. However, under this expansion scenario, there would be 14,000 out-of-state adults (from Georgia) within a one-hour drive of a Florida casino, while there would be 216,000 out-of-state adults (from Georgia) within a two-hour drive.

1. Implications and Considerations

It is our understanding that if this scenario were implemented, all revenue sharing per the Seminole Compact would end. Additionally, the Seminole Tribe's Brighton and Big Cypress location would be authorized to conduct table games.

All of the Implications and Considerations in Scenario I (excluding revenue sharing impact) also apply to this Scenario, as well the following:

As noted in Spectrum's first report, many business leaders in the Orlando area fear that any quantifiable revenue gains to the State by placing a casino in that region could have significant ramifications for Orlando's family-friendly brand, which could reduce or negate any of those financial gains. While there is no reliable way to quantify such concerns, we suggest they have significant validity. We noted on p. 24 of that report: "Orlando's strength in attracting business travelers is growing without gaming, and that absence is to some degree fueling that growth. Orlando has carved out a significant, profitable niche in that national market, and gaming would clearly be antithetical to that image and its ability to dominate that important segment."[75]

[75] Spectrum Gaming Group, "Gambling Impact Study: Part 1, Section A: Assessment of the Florida Gaming Industry and its Economic Effects," July 1, 2013. P. 24

2. GGR and Related Projections

Under this scenario, we project six destination resorts could collectively generate $3.32 billion in GGR annually from 30,000 gaming positions. We project total slot revenue of $2.525 billion from 22,800 slot machines and total table revenue of $797.4 million from 1,200 table games. Additionally, we project gross non-gaming revenue of $1.441 billion stemming from on-site hotel rooms/related, food and beverage, as well as from other non-gaming activities occurring at each location.

We project the eight pari-mutuels in Miami-Dade and Broward counties would generate $355.9 million of gross slot revenue – which would be a 45.1 percent reduction in GGR for these casinos from what may otherwise occur (per the Baseline scenario). Additionally, under this scenario and with current number of slot machines by location, the range in slot revenue per unit per day would be $77 to $142 – so some locations may no longer be economically viable and/or may have to reduce the number of slot machines accordingly to match the reduction in demand/patrons.

Combined, we project the six destination resorts statewide, along with the eight pari-mutuels in Miami-Dade and Broward counties, could generate $3.678 billion in GGR, with $2.881 billion of gross slot revenue and $797.4 million of total table games revenue. From this, we assume taxable GGR would be $3.39 billion. This level of revenue would result in revenue due to the State as follows:

- $1.187 billion under the current 35 percent tax rate.
- $915.4 million at the US median effective GGR tax rate of 27 percent.
- $1.496 billion at the effective rate(s) in Pennsylvania.

We estimate the eight Native American casinos would have $1.104 billion of combined slot and table games revenue. In total, we project statewide GGR (from a total combination of 22 pari-mutuel, Native American and destination resort casinos in Florida) would be $4.783 billion. A summary of this scenario is in the following table:

Figure 68: Scenario J – Six destination resorts statewide, landscape and projections

Florida Casinos	Authorizing a limited number of casino/resort complexes around the State				Compared to Baseline	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	$ Var.	% Var.
# Locations	8	8	6	22	*6*	*37.5%*
# Counties	2	6	6	9	*3*	*50.0%*
# Slots	8,409	14,564	22,800	45,773	*22,800*	*99.2%*
# Table Games	0	431	1,200	1,631	*1,631*	*n/a*
# Gaming Positions	8,409	17,150	30,000	55,559	*32,586*	*141.8%*
GGR ($M)	$355.9	$1,104.4	$3,322.5	$4,782.8	*$2,327.1*	*94.8%*
GGR / Position / Day	$116	$176	$303	$236	*($57)*	*-19.5%*

Source: Spectrum Gaming Group

Additionally, we project the statewide casino participation rate (i.e., Florida adults visiting Florida casinos) would be 28.7 percent, while this rate for adults residing within a one-hour drive of a casino would be 33.9 percent and the rate would be 22 percent for those living beyond a one-hour drive of a casino.

3. Economic/Fiscal Impacts

Next, we determine the economic impacts of these scenarios using the REMI Tax-PI model, using the Default Budget and three different tax rates (see Chapter I[H] for methodology detail). Scenario J includes three years of construction starting in the first year and does not include Compact revenues. The economic impacts rise sharply in the first years which only reflect construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 13,002 and Gross State Product is $2.33 billion under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of -$45.2 million under the Default Budget to -$17.3 million under the Pennsylvania gaming tax rates.

Figure 69: Scenario J, six casino resorts statewide – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	53,101	52,752	49,912	13,002	11,146	10,828
Gross State Product	$3,537	$3,664	$3,585	$2,333	$2,236	$2,271
Gaming Taxes	($0.81)	($1.14)	($0.57)	($3.33)	($6.04)	($6.01)
Sales/Use Tax	$33.51	$71.00	$76.54	$53.25	$26.55	$23.98
Lottery	$10.03	$17.90	$14.66	$3.33	($6.89)	($7.00)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$22.42	$52.25	$60.84	$47.88	$31.13	$27.34
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	10,986	11,417	11,937	12,531	13,002	
Gross State Product	$2,355	$2,470	$2,597	$2,737	$2,333	
Gaming Taxes	($6.03)	($6.06)	($6.09)	($6.12)	($3.33)	
Sales/Use Tax	$23.31	$23.68	$24.74	$26.29	$53.25	
Lottery	($6.94)	($6.79)	($6.61)	($6.36)	$3.33	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$25.52	$24.77	$24.70	$25.13	$47.88	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 70: Scenario J, six casino resorts statewide – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	53,112	52,765	49,916	13,248	11,614	11,286
Gross State Product	$3,538	$3,665	$3,585	$2,353	$2,276	$2,312
Gaming Taxes	($0.32)	($0.39)	($0.10)	$10.19	$20.70	$21.27
Sales/Use Tax	$33.52	$71.02	$76.55	$53.45	$27.13	$24.79
Lottery	$10.03	$17.90	$14.66	$3.35	($6.83)	($6.91)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$22.42	$52.27	$60.86	$48.02	$31.52	$27.92
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	11,430	11,842	12,345	12,921	13,248	
Gross State Product	$2,396	$2,510	$2,638	$2,777	$2,353	
Gaming Taxes	$21.87	$22.49	$23.12	$23.75	$10.19	
Sales/Use Tax	$24.17	$24.60	$25.70	$27.27	$53.45	
Lottery	($6.87)	($6.72)	($6.54)	($6.30)	$3.35	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$26.19	$25.50	$25.48	$25.93	$48.02	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 71: Scenario J, six casino resorts statewide – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	53,115	52,770	49,922	13,206	11,533	11,205
Gross State Product	$3,539	$3,666	$3,586	$2,350	$2,268	$2,305
Gaming Taxes	($0.27)	($0.33)	($0.09)	$7.77	$15.81	$16.25
Sales/Use Tax	$33.52	$71.02	$76.56	$53.42	$27.03	$24.65
Lottery	$10.03	$17.90	$14.66	$3.35	($6.84)	($6.93)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$22.42	$52.27	$60.86	$48.01	$31.46	$27.83
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	11,352	11,768	12,270	12,851	13,206	
Gross State Product	$2,388	$2,503	$2,630	$2,770	$2,350	
Gaming Taxes	$16.72	$17.20	$17.68	$18.16	$7.77	
Sales/Use Tax	$24.03	$24.44	$25.53	$27.09	$53.42	
Lottery	($6.88)	($6.73)	($6.56)	($6.31)	$3.35	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$26.08	$25.39	$25.35	$25.79	$48.01	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 72: Scenario J, six casino resorts statewide – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	53,107	52,763	49,918	13,353	11,822	11,488
Gross State Product	$3,538	$3,665	$3,586	$2,362	$2,293	$2,329
Gaming Taxes	($0.44)	($0.52)	($0.11)	$15.92	$32.31	$33.18
Sales/Use Tax	$33.52	$71.02	$76.55	$53.53	$27.38	$25.15
Lottery	$10.03	$17.90	$14.66	$3.37	($6.80)	($6.88)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$22.42	$52.26	$60.85	$48.08	$31.70	$28.19
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	11,623	12,029	12,525	13,093	13,353	
Gross State Product	$2,413	$2,528	$2,655	$2,794	$2,362	
Gaming Taxes	$34.12	$35.07	$36.04	$37.00	$15.92	
Sales/Use Tax	$24.56	$25.01	$26.12	$27.71	$53.53	
Lottery	($6.84)	($6.69)	($6.52)	($6.28)	$3.37	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$26.50	$25.84	$25.84	$26.31	$48.08	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

If each destination resort were required to pay other fees that existing pari-mutuel licensees with slots pay (i.e., as-is under current law/current administration), then the opening, and consequent operation, of six destination resorts would result in additional, annually recurring license fees of $12 million and regulatory fees of $1.5 million.

Under this scenario, we believe it is reasonable to expect the creation/addition of six destination resorts throughout Florida would result in net, direct employment of 23,586 FTEs. Under this scenario, we project Florida's 22 casinos would yield net direct employment of 30,708 FTEs.

K. Scenario K: Broward/Miami-Dade Pari-Mutuels have Table Games, Resort Casinos in Broward/Miami-Dade, Renewal of Seminole Compact (and Option to End Pari-Mutuel Live Events)

Under this scenario, pari-mutuel facilities would be permitted to end live performances, with supplementation of horse purses and awards calculated as percentage of statewide GGR, rather than by facility.

The salient assumptions under this scenario:

- There would be two destination resorts operating in Florida – one in Miami-Dade County and one in Broward County (based on same exceptions and exclusions described in Scenario I).
- Existing pari-mutuel facilities with slots (inclusive of Dania Jai-Alai) would be authorized to conduct table games or other Class III games.
- The addition of table games that may include roulette and craps at all seven Seminole casinos.

It is our understanding that if this scenario were implemented, revenue sharing per the Seminole Compact would be impacted. Specifically, revenue sharing would exclude net win generated at the Seminole Tribe's Broward county facilities.

1. Implications and Considerations

This scenario concentrates full-blown casino gambling in South Florida, with the potential for 10 full-service casinos in the market. As such, there would be the opportunity to market South Florida as a gambling destination, one that could compete with Las Vegas and other fly-in gambling markets. Such marketing, however, could be at odds with the family-friendly tourism promotions that dominate advertising and marketing statewide.

A key issue would be tax parity: Would the destination resorts pay the same tax on GGR as the pari-mutuels would on their slot and table revenue? If not, there could be a competitive and potentially unfair imbalance; if so, the pari-mutuels may be encouraged to make substantial capital improvements to compete with the new destination resorts, which could result in significant gains in construction and permanent operational jobs.

By renewing the Seminole Compact and allowing house-banked table games, the Seminole casinos would retain their ability to compete effectively with all gaming entrants in the marketplace.

2. GGR and Related Projections (with Option to End Pari-Mutuel Live Events)

Under this scenario, we project two destination resorts in Miami-Dade and Broward counties could collectively generate $1.031 billion in GGR annually from 10,000 gaming positions. We project total slot revenue of $783.5 million from 7,600 slot machines and total table revenue of $247.4 million from 400 table games. Additionally, we project gross non-gaming revenue of $480.5 million stemming from on-site hotel rooms/related, food and beverage, as well as from other non-gaming activities occurring at each location.

We project the eight pari-mutuel locations in Miami-Dade and Broward counties would generate $483 million – a 25.5 percent reduction in GGR for these casinos from what may otherwise occur (per the Baseline scenario). Of this GGR, we project $409.9 million of gross slot revenue and $73.1 million in gross table games revenue. Additionally, under this scenario and with

current number of slot machines by location, the range in slot revenue per unit per day would be $90 to $160 – so some locations may no longer be economically viable and/or may have to reduce number of slot machines accordingly to match the reduction in demand/patrons.

Combined, we project the two destination resorts and eight pari-mutuel locations in Miami-Dade and Broward counties could generate $1.514 billion in GGR, with $1.193 billion of gross slot revenue and $320.5 million of total table games revenue. From this we assume taxable GGR would be $1.395 billion. This level of revenue would result in revenue due to the state as follows:

- $488.1 million under the current 35 percent tax rate.
- $376.5 million at the US median effective GGR tax rate of 27 percent.
- $618.4 million at the effective rate(s) in Pennsylvania.

In addition to the aforementioned revenue due to the state, we project $31.2 million would need to be generated for purse subsidies. Applying a uniform rate applicable to total GGR at all casinos in Florida (net of Native American operations), the rate to generate such purse subsidies would be 2.06 percent under this scenario; however, this rate would be 2.24 percent based on taxable GGR.

We estimate the eight Native American casinos would have $1.725 billion of combined slot and table games revenue.

In total, we project statewide GGR (from a total combination of 18 pari-mutuel, Native American and destination resort casinos in Florida) would be $3.239 billion. A summary of this scenario is in the following table:

Figure 73: Scenario K - Broward/Miami-Dade pari-mutuels have table games, resort casinos in Broward/Miami-Dade, renewal of Seminole Compact; landscape and projections

Florida Casinos	Broward/Miami-Dade pari-mutuels w/ table games and casino resort complexes in Broward/Miami-Dade				*Compared to Baseline*	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	*$ Var.*	*% Var.*
# Locations	8	8	2	18	*2*	*12.5%*
# Counties	2	6	2	6	*0*	*0.0%*
# Slots	8,409	14,564	7,600	30,573	*7,600*	*33.1%*
# Table Games	250	431	400	1,081	*1,081*	*n/a*
# Gaming Positions	9,909	17,150	10,000	37,059	*14,086*	*61.3%*
GGR ($M)	$483.0	$1,725.4	$1,030.9	$3,239.3	*$783.5*	*31.9%*
GGR / Position / Day	$134	$276	$282	$239	*($53)*	*n/a*

Source: Spectrum Gaming Group

We project the statewide casino participation rate (i.e., Florida adults visiting Florida casinos) would be approximately 23.1 percent, while the rate for adults residing within a one-hour drive of a casino location would be 32 percent and the rate would be 11.8 percent for those living beyond a one-hour drive of a casino location.

3. Economic/Fiscal Impacts (with Option to End Pari-Mutuel Live Events)

Next, we determine the economic impacts of this scenario using the REMI Tax-PI model, using the Default Budget. (See Chapter I[H] for methodology detail.) This scenario includes three years of construction starting in the first year and does not include Compact revenues. The economic impacts rise sharply in the first years which only reflect construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 2,179 and Gross State Product is $543 million under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of -$27.2 million under the Default Budget to -$17 million under the Pennsylvania gaming tax rates.

Figure 74: Scenario K, table games at Broward/Miami-Dade pari-mutuels and two destination resorts in Broward/Miami-Dade and renewal of Seminole Compact and reduction in pari-mutuel events – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	68,823	52,055	48,772	2,179	636	634
Gross State Product	$4,646	$3,573	$3,452	$543	$401	$396
Gaming Taxes	$0.14	($1.73)	($3.59)	($3.64)	($3.75)	($3.74)
Sales/Use Tax	$43.92	$82.09	$77.30	$47.63	$14.32	$10.38
Lottery	$5.69	$12.91	$13.60	$6.04	($0.59)	($0.36)
Compact Revenues	$0.00	($42.55)	($87.04)	($91.41)	($96.30)	($101.31)
All other Revenues	$29.93	$61.06	$62.65	$44.93	$22.94	$17.08

At Default Budget	Year 7	Year 8	Year 9	Year 10	Average
Employment	1,085	1,727	2,402	3,071	2,179
Gross State Product	$440	$510	$591	$678	$543
Gaming Taxes	($3.74)	($3.75)	($3.75)	($3.75)	($3.64)
Sales/Use Tax	$8.58	$7.95	$8.07	$8.69	$47.63
Lottery	($0.02)	$0.35	$0.71	$1.06	$6.04
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($91.41)
All other Revenues	$13.77	$11.67	$10.49	$9.91	$44.93

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 75: Scenario K, table games at Broward/Miami-Dade pari-mutuels and two destination resorts in Broward/Miami-Dade and renewal of Seminole Compact and reduction in pari-mutuel events – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	68,823	52,073	48,810	2,285	811	808
Gross State Product	$4,646	$3,574	$3,454	$552	$417	$411
Gaming Taxes	$0.17	($0.66)	($1.66)	$2.33	$6.39	$6.56
Sales/Use Tax	$43.92	$82.10	$77.33	$47.74	$14.56	$10.69
Lottery	$5.69	$12.91	$13.60	$6.05	($0.57)	($0.33)
Compact Revenues	$0.00	($42.55)	($87.04)	($91.41)	($96.30)	($101.31)
All other Revenues	$29.93	$61.07	$62.68	$45.02	$23.11	$17.30
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	1,249	1,884	2,557	3,217	2,285	
Gross State Product	$455	$525	$606	$693	$552	
Gaming Taxes	$6.75	$6.96	$7.17	$7.38	$2.33	
Sales/Use Tax	$8.91	$8.29	$8.43	$9.06	$47.74	
Lottery	$0.01	$0.38	$0.73	$1.09	$6.05	
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($91.41)	
All other Revenues	$14.02	$11.94	$10.79	$10.21	$45.02	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 76: Scenario K, table games at Broward/Miami-Dade pari-mutuels and two destination resorts in Broward/Miami-Dade and renewal of Seminole Compact and reduction in pari-mutuel events – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	68,824	52,076	48,812	2,276	790	784
Gross State Product	$4,646	$3,575	$3,454	$551	$415	$409
Gaming Taxes	$0.14	($0.55)	($1.38)	$1.70	$4.84	$4.96
Sales/Use Tax	$43.92	$82.10	$77.34	$47.74	$14.53	$10.65
Lottery	$5.69	$12.91	$13.60	$6.05	($0.57)	($0.33)
Compact Revenues	$0.00	($42.55)	($87.04)	($91.41)	($96.30)	($101.31)
All other Revenues	$29.93	$61.07	$62.68	$45.02	$23.10	$17.28
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	1,227	1,865	2,534	3,195	2,276	
Gross State Product	$452	$522	$604	$691	$551	
Gaming Taxes	$5.11	$5.27	$5.43	$5.60	$1.70	
Sales/Use Tax	$8.87	$8.25	$8.38	$9.00	$47.74	
Lottery	$0.00	$0.38	$0.73	$1.08	$6.05	
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($91.41)	
All other Revenues	$14.00	$11.92	$10.75	$10.17	$45.02	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 77: Scenario K, table games at Broward/Miami-Dade pari-mutuels and two destination resorts in Broward/Miami-Dade and renewal of Seminole Compact and reduction in pari-mutuel events – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	68,826	52,071	48,797	2,312	880	875
Gross State Product	$4,647	$3,574	$3,454	$555	$423	$417
Gaming Taxes	$0.26	($0.91)	($2.33)	$3.83	$10.10	$10.35
Sales/Use Tax	$43.93	$82.11	$77.32	$47.75	$14.64	$10.80
Lottery	$5.69	$12.91	$13.60	$6.06	($0.56)	($0.32)
Compact Revenues	$0.00	($42.55)	($87.04)	($91.41)	($96.30)	($101.31)
All other Revenues	$29.93	$61.07	$62.66	$45.03	$23.16	$17.39
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	1,315	1,948	2,616	3,274	2,312	
Gross State Product	$461	$531	$612	$698	$555	
Gaming Taxes	$10.65	$10.96	$11.28	$11.60	$3.83	
Sales/Use Tax	$9.04	$8.43	$8.56	$9.19	$47.75	
Lottery	$0.02	$0.39	$0.74	$1.09	$6.06	
Compact Revenues	($106.33)	($111.31)	($116.24)	($120.97)	($91.41)	
All other Revenues	$14.12	$12.05	$10.89	$10.33	$45.03	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

If each destination resort were required to pay other fees that existing pari-mutuel licensees with slots pay (i.e., as-is under current law/current administration), then the opening, and consequent operation, of two destination resorts would result in additional, annually recurring license fees of $4 million and regulatory fees of $500,000.

Under this scenario, we believe it is reasonable to expect the creation/addition of two destination resorts in southern Florida would result in net, direct employment of 7,501 FTEs. Under this scenario, we project Florida's 18 casinos would yield net direct employment of 18,560 FTEs.

L. Scenario L: Slots and Tables at Pari-Mutuels Statewide, Resort Casinos Statewide, Seminole Tribe has Full Gambling, Pari-Mutuels have Option to End Live Events

Under this scenario, pari-mutuel facilities would be permitted to end live performances, with supplementation of horse purses and awards calculated as percentage of statewide GGR, rather than by facility.

The salient assumptions under this scenario:

- There would be six destination resorts operating in Florida (based on same exceptions and exclusions described in Scenario J).
- Existing pari-mutuel facilities with slots (inclusive of Dania Jai-Alai) would be authorized to conduct table games or other Class III games.
- The 20 pari-mutuel locations outside of Miami-Dade and Broward counties could offer both slots and table games (or other Class III games).
- The addition of table games that may include roulette and craps at all seven Seminole casinos; however, revenue sharing under Compact ceases.

Under this scenario, there could be a total of 42 casino locations throughout Florida. However, based on assumptions utilized throughout this report, our modeling indicates that many locations would not be economically viable (that is each generating enough GGR to warrant 500 slot machines that would average at least $200 in revenue per unit per day). Further assuming that the six destination resorts do materialize (at the $2 billion per location threshold and having 5,000 gaming positions each), while existing operators maintain current gaming supply, then at least nine of the 20 pari-mutuel locations throughout the state (and outside of Miami-Dade and Broward counties) would not be economically viable.

It is our understanding that if this scenario were implemented, all revenue sharing per the Seminole Compact would end.

1. Implications and Considerations

This is effectively a "wide-open" scenario that could result in Florida having more casinos than all but five states (Nevada 269, Oklahoma 117, California 68, South Dakota, 48, Colorado 43[76]). There could be saturation in certain markets and the viability of some prospective operations would be in doubt. The presence of so many casinos would make them highly visible throughout the state and potentially change the perception of Florida among some visitors. Tourism-related agencies and groups would need to consider whether to include casinos as part of their marketing campaigns.

The State would need to address the regulatory structure to effectively regulate up to 34 commercial casinos.

We note that it is unlikely all 42 potential casino locations would be economically viable, due primarily to saturation in certain markets.

As noted in Scenario H, the revenue generated by slot machines and table games statewide could provide a valuable funding source for racing purses and improved racing facilities, as demonstrated with the South Florida racinos and in other racino states. This could in turn enable the host pari-mutuel facilities to attract more and higher-quality horses and jockeys (and

[76] Counts as of 2012 for commercial casinos, 2011 for Indian casinos.

greyhounds), which would flow through to benefit trainers and breeders. However – as results in other racino states have shown – a higher-quality racing product does not necessarily translate into higher handle/increased popularity for the racing industry, as this activity is in decline nationwide.

As noted in Chapter I[E][3], the addition of slot machines may positively impact cardroom revenues. The cardrooms may also benefit from crossover between poker players and blackjack players. The capital improvements required to add slot machines and table games may require, or at least encourage, the host racetrack to simultaneously upgrade its cardroom, which could make it more popular with patrons.

As noted in Scenario K, a key issue would be tax parity: Would the destination resorts pay the same tax on GGR as the pari-mutuels would on their slot and table revenue? If not, there could be a competitive and potentially unfair imbalance; if so, the pari-mutuels may be encouraged to make substantial capital improvements to compete with the new destination resorts, which could result in significant gains in construction and permanent operational jobs. At the same time, we note that the Seminole casinos would retain their ability to compete effectively with all gaming entrants in the marketplace.

2. GGR and Related Projections (Minimizing Cannibalization, Pari-Mutuels have Option to End Live Events)

Under this scenario, we project six destination resorts could collectively generate $3.161 billion in GGR annually from 30,000 gaming positions. We project total slot revenue of $2.4 billion from 22,800 slot machines and total table revenue of $758.5 million from 1,200 table games. Additionally, we project gross non-gaming revenue of $1.44 billion stemming from on-site hotel rooms/related, food and beverage, as well as from other non-gaming activities occurring at each location.

Under this scenario, we project slot machines could be economically viable additions at only 11 of the 20 pari-mutuels outside of Miami-Dade and Broward counties. We project these 11 pari-mutuel locations could collectively generate $732.4 million in GGR annually from 9,086 gaming positions. We project total slot revenue of $620.7 million from 7,700 slot machines and total table revenue of $111.7 million from 231 table games. Of the 11 locations, the average location would have 826 gaming positions (700 slots and 21 table games), while the median value in our result set is 590 gaming positions (500 slots and 15 table games). Furthermore, six locations would have the minimal amount of gaming positions (or 500 slots and 15 table games), while the largest would warrant 1,500 slots and 45 table games (1,770 gaming positions) per our modeling and assumptions utilized.

We project the eight pari-mutuel locations in Miami-Dade and Broward counties would generate $441.7 million in GGR, with $374.8 million of gross slot revenue and $66.9 million of total table games revenue - this would be a 31.9 percent reduction in GGR for these eight casinos from what may otherwise occur (per the Baseline scenario). Therefore, under this scenario, there

would be 19 pari-mutuel locations with both slots and table games that could generate $995.5 million of gross slot revenue and $178.6 million of total table games revenue.

From the combination of destination resorts and casinos at pari-mutuel locations we assume taxable GGR would be $4 billion. This level of revenue would result in "revenue due to the state" as follows:

- $1.4 billion under the current 35 percent tax rate.
- $1.079 billion at the US median effective GGR tax rate of 27 percent.
- $1.763 billion at the effective rate(s) in Pennsylvania.

In addition to aforementioned revenue due to the state, we project $31.2 million would need to be generated for purse subsidies. Applying a uniform rate applicable to total GGR at all casinos in Florida (net of Native American operations), the rate to generate such purse subsidies would be 0.72 percent under this scenario; however, this rate would be 0.78 percent based on taxable GGR.

We estimate the eight Native American casinos would have $1.063 billion of combined slot and table games revenue.

In total, we project statewide GGR (from a total of 33 destination resort casinos, pari-mutuel, and/or Native American casinos in Florida) would be $5.4 billion. A summary of this scenario is in the following table:

Figure 78: Scenario L-1 – six destination resorts, slots and tables at pari-mutuels statewide, Seminole casinos have full gambling; minimizing cannibalization; landscape and projections

Florida Casinos	Six casino resort complexes statewide, with slots/tables at pari-mutuels statewide - minimizing cannibalization				*Compared to Baseline*	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	*$ Var.*	*% Var.*
# Locations	19	8	6	33	*17*	*106.3%*
# Counties	13	6	6	19	*13*	*216.7%*
# Slots	16,109	14,564	22,800	53,473	*30,500*	*132.8%*
# Table Games	481	431	1,200	2,112	*2,112*	*n/a*
# Gaming Positions	18,995	17,150	30,000	66,145	*43,172*	*187.9%*
GGR ($M)	$1,174.1	$1,063.0	$3,160.5	$5,397.6	*$2,941.9*	*119.8%*
GGR / Position / Day	$169	$170	$289	$224	*($69)*	*-23.7%*

Source: Spectrum Gaming Group

We project the statewide casino participation rate (i.e., Florida adults visiting Florida casinos) would be approximately 32.8 percent, while the rate for adults residing within a one-hour drive of a casino location would be 36.2 percent and the rate would be 28.5 percent for those living beyond a one-hour drive of a casino location.

3. Economic/Fiscal Impacts (Minimizing Cannibalization, Pari-mutuels have Option to End Live Events)

Next, we determine the economic impacts of this scenario using the REMI Tax-PI model, using the Default Budget. (See Chapter I[H] for methodology detail.) This scenario includes three years of construction starting in the first year and does not include Compact revenues. The economic impacts rise sharply in the first years which only reflect construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 14,388 and Gross State Product is $2.5 billion under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of -$35.2 million under the Default Budget to -$11.3 million under the Pennsylvania gaming tax rates.

Figure 79: Scenario L-1 (minimizing cannibalization), slots and table games at pari-mutuels statewide and six destination resorts statewide and Seminole casinos have full range of games but without Compact revenue-sharing and reduction in pari-mutuel events – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	66,577	56,308	28,183	14,388	13,456	13,343
Gross State Product	$4,466	$4,014	$1,793	$2,497	$2,485	$2,550
Gaming Taxes	($0.80)	$3.70	$8.64	$8.50	$8.57	$8.70
Sales/Use Tax	$42.17	$82.22	$66.00	$39.71	$26.67	$25.59
Lottery	$11.17	$18.04	$3.47	($8.60)	($10.21)	($10.23)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$28.39	$61.53	$51.59	$34.85	$31.30	$29.25
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	13,583	14,045	14,578	15,190	14,388	
Gross State Product	$2,652	$2,780	$2,919	$3,070	$2,497	
Gaming Taxes	$8.86	$9.02	$9.16	$9.29	$8.50	
Sales/Use Tax	$25.74	$26.74	$28.30	$30.28	$39.71	
Lottery	($10.17)	($10.02)	($9.84)	($9.58)	($8.60)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$28.49	$28.65	$29.31	$30.39	$34.85	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 80: Scenario L-1 (minimizing cannibalization), slots and table games at pari-mutuels statewide and six destination resorts statewide and Seminole casinos have full range of games but without Compact revenue-sharing and reduction in pari-mutuel events – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	66,585	56,276	28,106	14,517	13,786	13,675
Gross State Product	$4,466	$4,012	$1,786	$2,507	$2,514	$2,580
Gaming Taxes	($0.30)	$2.04	$4.56	$15.75	$27.44	$28.24
Sales/Use Tax	$42.18	$82.20	$65.91	$39.73	$27.03	$26.16
Lottery	$11.17	$18.04	$3.46	($8.60)	($10.17)	($10.17)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$28.39	$61.52	$51.53	$34.86	$31.52	$29.64
At Florida Pari-Mutuel Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	13,908	14,362	14,886	15,487	14,517	
Gross State Product	$2,682	$2,810	$2,949	$3,100	$2,507	
Gaming Taxes	$29.08	$29.95	$30.83	$31.71	$15.75	
Sales/Use Tax	$26.37	$27.40	$29.00	$31.00	$39.73	
Lottery	($10.11)	($9.97)	($9.79)	($9.54)	($8.60)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$28.96	$29.17	$29.87	$30.98	$34.86	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 81: Scenario L (minimizing cannibalization), slots and table games at pari-mutuels statewide and six destination resorts statewide and Seminole casinos have full range of games but without Compact revenue-sharing and reduction in pari-mutuel events – economic impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	66,588	56,270	28,090	14,458	13,684	13,571
Gross State Product	$4,467	$4,011	$1,785	$2,502	$2,505	$2,571
Gaming Taxes	($0.25)	$1.67	$3.75	$12.37	$21.39	$22.01
Sales/Use Tax	$42.18	$82.20	$65.90	$39.68	$26.90	$25.98
Lottery	$11.17	$18.04	$3.46	($8.60)	($10.19)	($10.19)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$28.39	$61.52	$51.53	$34.83	$31.44	$29.52
At US Median Gaming Tax Rate	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	13,806	14,262	14,789	15,393	14,458	
Gross State Product	$2,673	$2,801	$2,940	$3,091	$2,502	
Gaming Taxes	$22.66	$23.33	$24.01	$24.70	$12.37	
Sales/Use Tax	$26.17	$27.20	$28.79	$30.78	$39.68	
Lottery	($10.14)	($9.99)	($9.81)	($9.56)	($8.60)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$28.81	$29.02	$29.71	$30.82	$34.83	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 82: Scenario L-1 (minimizing cannibalization), slots and table games at pari-mutuels statewide and six destination resorts statewide and Seminole casinos have full range of games but without Compact revenue-sharing and reduction in pari-mutuel events – economic impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	66,583	56,294	28,139	14,662	14,042	13,923
Gross State Product	$4,466	$4,013	$1,789	$2,519	$2,536	$2,602
Gaming Taxes	($0.40)	$2.92	$6.48	$23.77	$41.81	$43.04
Sales/Use Tax	$42.18	$82.22	$65.95	$39.88	$27.36	$26.61
Lottery	$11.17	$18.05	$3.46	($8.58)	($10.14)	($10.13)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$28.39	$61.53	$51.57	$34.97	$31.77	$29.98
At Pennsylvania Gaming Tax Rates	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	14,152	14,601	15,115	15,709	14,662	
Gross State Product	$2,705	$2,833	$2,972	$3,122	$2,519	
Gaming Taxes	$44.33	$45.67	$47.02	$48.38	$23.77	
Sales/Use Tax	$26.86	$27.93	$29.54	$31.57	$39.88	
Lottery	($10.08)	($9.94)	($9.76)	($9.51)	($8.58)	
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)	
All other Revenues	$29.35	$29.61	$30.35	$31.47	$34.97	

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

If each destination resort and the additional 11 pari-mutuel locations outside of Miami-Dade and Broward counties were required to pay other fees that existing pari-mutuel licensees with slots pay (i.e., as-is under current law/current administration), then the opening, and consequent operation, of these 17 facilities would result in additional, annually recurring license fees of $34 million and $4.25 million in regulatory fees.

Under this scenario, we believe it is reasonable to expect the creation/addition of six destination resorts in Florida would result in net, direct employment of 22,823 FTEs, while the 11 pari-mutuel locations outside of Miami-Dade and Broward counties would yield net, direct employment of 4,758 FTEs. Under this scenario, we project Florida's 33 casinos would yield net direct employment of 35,419 FTEs.

4. GGR and Related Projections (Maximizing GGR, Pari-Mutuels have Option to End Live Events)

In contrast to the objective in previous scenario (i.e., minimizing cannibalization of GGR to existing casinos), under this scenario, we assume the seven pari-mutuel operators outside of Miami-Dade and Broward counties and within a one-hour drive of an existing Florida casino could have more than 500 slot machines and 15 table games.

Under this scenario, we project six destination resorts could collectively generate $3.114 billion in GGR annually from 30,000 gaming positions. We project total slot revenue of $2.367

billion from 22,800 slot machines and total table revenue of $747.4 million from 1,200 table games. Additionally, we project gross non-gaming revenue of $1.44 billion stemming from on-site hotel rooms/related, food and beverage, as well as from other non-gaming activities occurring at each location.

Under this scenario, we project slot machines could be economically viable additions at only 11 of the 20 pari-mutuel locations outside of Miami-Dade and Broward counties. We project these 11 pari-mutuel locations could collectively generate $816 million in GGR annually from 10,738 gaming positions. We project total slot revenue of $691.6 million from 9,100 slot machines and total table revenue of $124.5 million from 273 table games. Of the 11 locations, the average location would have 976 gaming positions (827 slots and 25 table games), while the median value in our result set is 944 gaming positions (800 slots and 24 table games). Furthermore, only two locations would have the minimal amount of gaming positions (or 500 slots and 15 table games), while the largest would warrant 1,500 slots and 45 table games (1,770 gaming positions) per our modeling and assumptions utilized.

We project the eight pari-mutuel locations in Miami-Dade and Broward counties would generate $441.7 million in GGR, with $374.8 million of gross slot revenue and $66.9 million of total table games revenue – this would be a 31.9 percent reduction in GGR for these eight casinos from what may otherwise occur (per the Baseline scenario). Therefore, under this scenario, there would be 19 pari-mutuel locations with both slots and table games that could generate $1.066 billion of gross slot revenue and $191.4 million of total table games revenue.

From the combination of destination resorts and casinos at pari-mutuel locations we assume taxable GGR would be $4.03 billion. This level of revenue would result in revenue due to the state as follows:

- $1.41 billion under the current 35 percent tax rate.
- $1.088 billion at the US median effective GGR tax rate of 27 percent.
- $1.781 billion at the effective rate(s) in Pennsylvania.

In addition to aforementioned revenue due to the state, we project $31.2 million would need to be generated for purse subsidies. Applying a uniform rate applicable to total GGR at all casinos in Florida (net of Native American operations), the rate to generate such purse subsidies would be 0.71 percent under this scenario; however, this rate would be 0.77 percent based on taxable GGR.

We estimate the eight Native American casinos would have $1.026 billion of combined slot and table games revenue.

In total, we project statewide GGR (from a total of 33 destination resort casinos, pari-mutuel and/or Native American casinos in Florida) would be $5.4 billion. A summary of this scenario is in the following table:

Figure 83: Scenario L-2 – six destination resorts, slots and tables at pari-mutuels statewide, Seminole casinos have full gambling; maximizing GGR; landscape and projections

Florida Casinos	Six casino resort complexes statewide, with slots/tables at pari-mutuels statewide - maximizing GGR				Compared to Baseline	
	Total Pari-mutuel	Native American	Destination Resorts	Grand Total	$ Var.	% Var.
# Locations	19	8	6	33	17	106.3%
# Counties	13	6	6	19	13	216.7%
# Slots	17,509	14,564	22,800	54,873	31,900	138.9%
# Table Games	523	431	1,200	2,154	2,154	n/a
# Gaming Positions	20,647	17,150	30,000	67,797	44,824	195.1%
GGR ($M)	$1,257.8	$1,025.6	$3,114.2	$5,397.6	$2,941.9	119.8%
GGR / Position / Day	$167	$164	$284	$218	($75)	-25.5%

Source: Spectrum Gaming Group

We project the statewide casino participation rate (i.e., Florida adults visiting Florida casinos) would be approximately 32.8 percent, while the rate for adults residing within a one-hour drive of a casino location would be 36.2 percent and the rate would be 28.5 percent for those living beyond a one-hour drive of a casino location.

5. Economic/Fiscal Impacts (Maximizing GGR, Pari-Mutuels have Option to End Live Events)

Next, we determine the economic impacts of this scenario using the REMI Tax-PI model, using the Default Budget. (See Chapter I[H] for methodology detail.) Scenario L-2 includes three years of construction starting in the first year and does not include Compact revenues. The economic impacts rise sharply in the first years which only reflect construction impacts, then drop after the conclusion of construction before continuing on a steady growth path reflecting the impacts of changes in the gaming sector. Over the course of the simulation, the average employment is 15,827 and Gross State Product is $2.59 billion under the Default Budget. Where the employment and Gross State Product differ in the other scenarios is due to the effects of recycling the new state revenues back into the economy. Total state revenues range from an average of -$82.2 million under the Pennsylvania gaming tax rates to -$9.5 million under the US median gaming tax rates.

Figure 84: Scenario L-2 (maximizing GGR), slots and table games at pari-mutuels statewide and six destination resorts statewide and Seminole casinos have full range of games but without Compact revenue-sharing and reduction in pari-mutuel events – economic impacts using Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	66,577	57,211	54,018	15,827	13,865	13,523
Gross State Product	$4,466	$4,074	$3,981	$2,590	$2,490	$2,530
Gaming Taxes	($0.80)	$4.48	$10.36	$10.23	$10.09	$10.23
Sales/Use Tax	$42.17	$82.66	$82.50	$58.36	$30.85	$28.31
Lottery	$11.17	$17.92	$12.46	$0.47	($10.38)	($10.46)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$28.39	$61.87	$67.97	$54.52	$37.35	$33.65

At Default Budget	Year 7	Year 8	Year 9	Year 10	Average
Employment	13,712	14,206	14,810	15,502	15,827
Gross State Product	$2,623	$2,752	$2,895	$3,053	$2,590
Gaming Taxes	$10.39	$10.57	$10.73	$10.88	$10.23
Sales/Use Tax	$27.78	$28.40	$29.81	$31.75	$58.36
Lottery	($10.40)	($10.22)	($10.01)	($9.71)	$0.47
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)
All other Revenues	$32.03	$31.59	$31.88	$32.71	$54.52

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 85: Scenario L-2 (maximizing GGR), slots and table games at pari-mutuels statewide and six destination resorts statewide and Seminole casinos have full range of games but without Compact revenue-sharing and reduction in pari-mutuel events – economic impacts using Florida pari-mutuel gaming tax rate

At Florida Pari-Mutuel Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	66,585	57,171	53,928	15,944	14,179	13,841
Gross State Product	$4,466	$4,071	$3,973	$2,599	$2,517	$2,558
Gaming Taxes	($0.30)	$2.43	$5.55	$16.53	$27.79	$28.58
Sales/Use Tax	$42.18	$82.65	$82.40	$58.38	$31.19	$28.85
Lottery	$11.17	$17.92	$12.45	$0.47	($10.34)	($10.41)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$28.39	$61.86	$67.91	$54.53	$37.56	$34.03

At Florida Pari-Mutuel Gaming Tax Rate	Year 7	Year 8	Year 9	Year 10	Average
Employment	14,023	14,509	15,104	15,788	15,944
Gross State Product	$2,652	$2,780	$2,924	$3,081	$2,599
Gaming Taxes	$29.43	$30.31	$31.21	$32.10	$16.53
Sales/Use Tax	$28.38	$29.05	$30.48	$32.46	$58.38
Lottery	($10.34)	($10.18)	($9.96)	($9.67)	$0.47
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)
All other Revenues	$32.49	$32.11	$32.44	$33.31	$54.53

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 86: Scenario L-2 (maximizing GGR), slots and table games at pari-mutuels statewide and six destination resorts statewide and Seminole casinos have full range of games but without Compact revenue-sharing and reduction in pari-mutuel events –impacts using US median gaming tax rate

At US Median Gaming Tax Rate	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	66,588	57,163	53,910	15,883	14,079	13,740
Gross State Product	$4,467	$4,071	$3,972	$2,594	$2,508	$2,549
Gaming Taxes	($0.25)	$1.99	$4.56	$13.02	$21.70	$22.32
Sales/Use Tax	$42.18	$82.64	$82.38	$58.31	$31.05	$28.66
Lottery	$11.17	$17.91	$12.45	$0.46	($10.35)	($10.43)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	$28.39	$61.85	$67.89	$54.49	$37.47	$33.89

At US Median Gaming Tax Rate	Year 7	Year 8	Year 9	Year 10	Average
Employment	13,921	14,412	15,008	15,694	15,883
Gross State Product	$2,642	$2,771	$2,914	$3,072	$2,594
Gaming Taxes	$22.97	$23.65	$24.34	$25.04	$13.02
Sales/Use Tax	$28.18	$28.84	$30.27	$32.22	$58.31
Lottery	($10.36)	($10.19)	($9.98)	($9.69)	$0.46
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)
All other Revenues	$32.33	$31.94	$32.26	$33.12	$54.49

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

Figure 87: Scenario L-2 (maximizing GGR), slots and table games at pari-mutuels statewide and six destination resorts statewide and Seminole casinos have full range of games but without Compact revenue-sharing and reduction in pari-mutuel events –impacts using Pennsylvania gaming tax rates

At Pennsylvania Gaming Tax Rates	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	66,583	57,194	53,972	16,097	14,436	14,090
Gross State Product	$4,466	$4,073	$3,977	$2,612	$2,538	$2,580
Gaming Taxes	($0.40)	$3.47	$7.90	$24.87	$42.25	$43.48
Sales/Use Tax	$42.18	$82.66	$82.45	$58.53	$31.53	$29.30
Lottery	$11.17	$17.92	$12.46	$0.49	($10.30)	($10.37)
Compact Revenues	($113.45)	($113.92)	($109.72)	($109.72)	($111.92)	($111.72)
All other Revenues	($81.33)	($39.40)	($19.01)	($23.85)	($38.47)	($39.48)

At Pennsylvania Gaming Tax Rates	Year 7	Year 8	Year 9	Year 10	Average
Employment	14,265	14,746	15,330	16,013	16,097
Gross State Product	$2,674	$2,803	$2,946	$3,104	$2,612
Gaming Taxes	$44.79	$46.14	$47.51	$48.89	$24.87
Sales/Use Tax	$28.87	$29.57	$31.02	$33.02	$58.53
Lottery	($10.31)	($10.14)	($9.93)	($9.64)	$0.49
Compact Revenues	($113.92)	($116.22)	($118.57)	($120.97)	($109.72)
All other Revenues	($42.16)	($44.34)	($45.92)	($46.94)	($23.85)

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

If each destination resort and the additional 11 pari-mutuel locations outside of Miami-Dade and Broward counties were required to pay other fees that existing pari-mutuel licensees with slots pay (i.e., as-is under current law/current administration), then the opening, and consequent operation, of these 17 facilities would result in additional, annually recurring license fees of $34 million and $4.25 million in regulatory fees.

Under this scenario, we believe it is reasonable to expect the creation/addition of six destination resorts in Florida would result in net, direct employment of 22,605 FTEs, while the 11 pari-mutuel locations outside of Miami-Dade and Broward counties would yield net, direct employment of 5,623 FTEs. Under this scenario, we project Florida's 33 casinos would yield net direct employment of 35,901 FTEs.

M. Social Costs of Combining Expansion Scenarios

As discussed above, obviously the different scenarios for gambling expansion could have very different fiscal effects on the State of Florida. What about the social costs associated with pathological gambling? Will these be expected to change dramatically, depending on the specific scenario of gambling expansion?

In Chapter IV, we discuss the prevalence of problem and pathological gambling. We also posited a variety of social cost estimates based on the 2012 Census Bureau's population estimate and a social cost figure based on an economics definition of social cost. Here we wish to reiterate some of the conceptual problems with deriving social cost estimate, then we will examine the likely changes in social costs depending on the different gambling expansion scenarios.

"Social costs" generally refer to negative social impacts that are caused by problem – or pathological gamblers. Examples of such measurable social costs include legal costs and therapy costs. But there also may be significant immeasurable social costs, such as the anguish the pathological gamblers cause themselves and their families. Because of difficulties in defining and measuring the social costs of gambling, as discussed in detail in the previous section, any social cost estimate – including that posited in this report – should be viewed with skepticism. This is because this area of research is simply not well-developed, and many of the methodological problems are insurmountable. Nevertheless, for REMI's analysis in this report, we used a social cost of gambling estimate of $373.4 million per year for the state of Florida. This figure was based on lifetime prevalence estimates from the literature of 0.5 percent for problem gambling and 0.5 percent for pathological gambling. We used an economics definition of social cost, which specifies that reductions in societal wealth should be measured, but that transfers of wealth and costs borne by the gamblers themselves should not be included in a social cost estimate.

The key question for understanding how social costs are likely to change with different scenarios of gambling expansion in Florida is: Does pathological gambling prevalence change as the availability of gambling changes? If the answer is "yes," then we may see the social costs in Florida increase with the introduction of new forms of gambling. However, if prevalence tends to

remain fairly constant, then we would not expect social costs to vary much – whatever gambling expansion scenario is considered.

Obviously, Florida currently has a variety of opportunities for legal gambling, including pari-mutuels, Indian casinos and the lottery. Yet, if commercial casinos were to open or if slot machines were introduced at racetracks around the state, one would expect that these new gambling opportunities would attract new customers to those businesses. Hence, we should expect that the amount of gambling by state residents will increase. In addition, then, we might also expect there to be an increase in the amount of problem and pathological gambling. The literature is informative on this issue.

As we discussed in Chapter IV, there have been several different studies on the relationship between casino proximity and pathological gambling. Some of the papers were reviewed in a recently published study.[77] The review by Tong and Chim suggests that the evidence is mixed. However, most of the evidence reviewed in this paper seems to suggest that there might be a short-term increase in problem/pathological gambling after the introduction of a new gambling opportunity (say, the opening of a new casino). However, studies that looked beyond one year did not show an increase in problem gambling compared to the time before the new gambling venue opened.[78]

This evidence is consistent with the "social adaptation model" of new or expanded gambling, as discussed in the paper by Shaffer et al.[79] As discussed in the previous section of this report, the social adaptation model suggests that the novelty of a new gambling venue or of new types of gambling available at an existing venue may initially generate new interest on the part of gamblers. This leads to increased gambling and problem gambling. Yet, after the novelty effect wears off, the levels of gambling and problem gambling fall back in line with their more stable, long-term values.[80]

This suggests that the different scenarios for gambling expansion in Florida being considered in this section are not likely to have a significant long-term impact on the social costs of gambling in Florida. Yes, there may be a short-term increase in these values, but it is difficult, if not impossible, to provide a specific estimate of how much social costs are likely to rise in the short term. Hopefully, policymakers and voters are more concerned with the likely longer-term

[77] Henry H.Y. Tong and David Chim, "The Relationship Between Casino Proximity and Problem Gambling," *Asian Journal of Gambling Issues and Public Health*, Volume 3, 2013. Available at http://ajgiph.com/content/3/1/2.

[78] Ibid., p. 16.

[79] Howard J. Shaffer, Richard A. LaBrie and Debi LaPlante, "Laying the Foundation for Quantifying Regional Exposure to Social Phenomena: Considering the Case of Legalized Gambling as a Public Health Toxin," *Psychology of Addictive Behaviors*, Volume 18, 2004, p. 40-48.

[80] Howard J. Shaffer, Richard A. LaBrie and Debi LaPlante, "Laying the Foundation for Quantifying Regional Exposure to Social Phenomena: Considering the Case of Legalized Gambling as a Public Health Toxin," *Psychology of Addictive Behaviors*, Volume 18, 2004, p. 42.

impacts of expanded gambling and will, therefore, be more interested in the long-term impacts and not focus too much on the short-term (next-year) impacts. Because of this, we assume that the social costs of gambling would remain fairly stable, at least in the long run however gambling might be expanded in Florida.

The economic impact simulation focuses on capturing the economic impact of the social costs of expanded gaming. These costs were modeled by reducing the amenity value of Florida. (The amenity value is a measure of attractiveness to economic migrants. The amenity value of a region falls due to, say, worsening safety, noise, traffic, etc. This causes fewer people to want to live there, leading to a whole ripple effect of economic impacts.) This methodology is used to capture non-pecuniary aspects that can generally be described as quality of life. Over the course of the simulation, the average employment is -595 jobs and Gross State Product is $-57 million. Total state revenues average of -$22.8 million.

Figure 88: Economic impacts of the social costs of gambling on the State of Florida

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	-197	-266	-358	-476	-592	-717
Gross State Product	($21)	($27)	($35)	($46)	($57)	($69)
Gaming Taxes	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Sales/Use Tax	($1.37)	($1.78)	($2.21)	($2.68)	($3.18)	($3.71)
Lottery	$0.37	$0.49	$0.58	$0.65	$0.70	$0.73
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
All other Revenues	($3.59)	($4.60)	($5.48)	($6.33)	($7.07)	($7.79)

At Default Budget	Year 7	Year 8	Year 9	Year 10	Average
Employment	-836	-953	-1,066	-1,185	-665
Gross State Product	($83)	($96)	($110)	($126)	($67)
Gaming Taxes	($0.00)	($0.00)	($0.00)	($0.00)	($0.00)
Sales/Use Tax	($4.27)	($4.87)	($5.51)	($6.20)	($3.58)
Lottery	$0.76	$0.78	$0.78	$0.78	$0.66
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00
All other Revenues	($8.49)	($9.21)	($9.88)	($10.55)	($7.30)

Source: Spectrum Gaming Group, Regional Economic Models Inc. $ in nominal millions.

N. Evaluating Three Alternative Gaming-Tax Regimes

Our fiscal analyses evaluate each of three alternative tax regimes, with respect to casino GGR projections (that is revenue derived from slots and/or table games, and excludes poker and cardroom operations), as directed by the Florida Legislature:

- One in which all non-lottery gaming activities are taxed at rates corresponding to current pari-mutuel tax rates;

- One in which all non-lottery gaming activities are taxed at national average rates for their respective subsectors; and
- One in which non-lottery gaming activities are taxed at a rate that would maximize state revenues.

Note that Spectrum provided the projected tax receipts under each of the three tax regimes for each of the relevant scenarios above.

For the first bullet point above, we assume that all GGR resulting from our modeling will be taxed at the current effective GGR tax rate of 35 percent on slots at pari-mutuels. Since this is applicable to net slot revenue (i.e., net of promotional credits and unclaimed tickets), we further assume net slot revenue is 90 percent of total slot revenue and assume all applicable table games revenue is fully taxable or subject to revenue sharing (related to revenue sharing at Native American casinos and taxation at destination resorts, we assume 25 percent of total GGR is, or will be, table-games related).

For the second bullet point above, we examine most recent and/or current annual, effective gaming tax rates from all states having commercial casino operations. This is based on tax data presented in the American Gaming Association ("AGA") 2013 edition of *State of the States: The AGA Survey of Casino Entertainment*) and GGR results prepared by respective state agencies (and published by Spectrumetrix). Succinctly, calculate the effective tax rate for each state with a commercial casino (of the 23 states reported) as the respective percentage of reported gaming tax revenue (per AGA) as a percentage of reported GGR by state. The following table displays these results for 2012 (sorted in alphabetical order by state).

Figure 89: Effective GGR tax rates by state, for commercial casino operations (2012, in alpha order)

State	# Casinos	GGR	Tax	*Effective Rate*	*Rank*
Colorado	41	$766.3	$104.3	*13.6%*	*20*
Delaware	3	$520.6	$217.4	*41.8%*	*5*
Florida	6	$489.2	$161.8	*33.1%*	*9*
Illinois	10	$1,638.2	$574.3	*35.1%*	*8*
Indiana	13	$2,685.5	$806.6	*30.0%*	*11*
Iowa	18	$1,466.8	$334.4	*22.8%*	*16*
Kansas	3	$341.1	$92.2	*27.0%*	*12*
Louisiana	18	$2,405.2	$579.5	*24.1%*	*15*
Maine	2	$99.3	$43.1	*43.4%*	*3*
Maryland	3	$377.8	$218.2	*57.8%*	*2*
Michigan	3	$1,416.7	$319.8	*22.6%*	*17*
Mississippi	30	$2,231.6	$272.7	*12.2%*	*21*
Missouri	13	$1,767.9	$471.4	*26.7%*	*13*
Nevada	265	$10,861.1	$868.6	*8.0%*	*23*
New Jersey	12	$3,056.1	$254.8	*8.3%*	*22*
New Mexico	5	$241.5	$62.8	*26.0%*	*14*
New York	9	$1,941.1	$822.7	*42.4%*	*4*
Ohio	4	$459.8	$138.2	*30.1%*	*10*
Oklahoma	2	$113.1	$20.4	*18.0%*	*18*
Pennsylvania	11	$3,807.4	$1,487.0	*39.1%*	*6*
Rhode Island	2	$528.0	$329.0	*62.3%*	*1*
South Dakota	35	$107.4	$16.6	*15.5%*	*19*
West Virginia	5	$1,035.5	$402.5	*38.9%*	*7*
Total (Avg. Eff. Rate)	513	$38,357.1	$8,598.2	*22.4%*	
Median				*27.0%*	

Source: American Gaming Association, respective state reporting agencies. $ in millions.

Figure 90: Effective GGR tax rates by state, for commercial casino operations (2012, ordered by rank)

State	# Casinos	GGR	Tax	*Effective Rate*	*Rank*
Rhode Island	2	$528.0	$329.0	*62.3%*	*1*
Maryland	3	$377.8	$218.2	*57.8%*	*2*
Maine	2	$99.3	$43.1	*43.4%*	*3*
New York	9	$1,941.1	$822.7	*42.4%*	*4*
Delaware	3	$520.6	$217.4	*41.8%*	*5*
Pennsylvania	11	$3,807.4	$1,487.0	*39.1%*	*6*
West Virginia	5	$1,035.5	$402.5	*38.9%*	*7*
Illinois	10	$1,638.2	$574.3	*35.1%*	*8*
Florida	6	$489.2	$161.8	*33.1%*	*9*
Ohio	4	$459.8	$138.2	*30.1%*	*10*
Indiana	13	$2,685.5	$806.6	*30.0%*	*11*
Kansas	3	$341.1	$92.2	*27.0%*	*12*
Missouri	13	$1,767.9	$471.4	*26.7%*	*13*
New Mexico	5	$241.5	$62.8	*26.0%*	*14*
Louisiana	18	$2,405.2	$579.5	*24.1%*	*15*
Iowa	18	$1,466.8	$334.4	*22.8%*	*16*
Michigan	3	$1,416.7	$319.8	*22.6%*	*17*
Oklahoma	2	$113.1	$20.4	*18.0%*	*18*
South Dakota	35	$107.4	$16.6	*15.5%*	*19*
Colorado	41	$766.3	$104.3	*13.6%*	*20*
Mississippi	30	$2,231.6	$272.7	*12.2%*	*21*
New Jersey	12	$3,056.1	$254.8	*8.3%*	*22*
Nevada	265	$10,861.1	$868.6	*8.0%*	*23*
Total (Avg. Eff. Rate)	513	$38,357.1	$8,598.2	*22.4%*	
Median			*272.7*	*27.0%*	

Source: American Gaming Association, respective state reporting agencies. $ in millions.

As illustrated, in 2012, the average effective GGR tax rate in the US (for the 23 states with commercial casinos and reporting such information) was 22.4 percent. However, the median effective GGR tax rate was 27 percent (i.e., 11 of the 23 states had higher rates, while 11 of the 23 states had lower rates; Kansas had the median value).

As such, for the second bullet point, we assume that all GGR resulting from our modeling will be taxed at the median effective GGR tax rate of 27 percent. We further assume this effective rate is applicable to net slot revenue (i.e., net of promotional credits and unclaimed tickets – assumed at 10 percent of slot revenue) and assume that all table games revenue is taxable at applicable rates.

The third bullet point, which seeks to identify a tax rate that would maximize state revenues, requires its own detailed analysis:

1. Tax policy

This section focuses on a critical theme that will resonate throughout this report: the role of tax policy in gaming. Setting the tax rate, and its attendant provisions, is a core input that meaningfully impacts various areas, including:

- Overall GGR levels

- Non-gaming revenue
- Employment
- Capital investment
- Ability of casinos to compete in-state and out-of-state
- Participation rates by adults
- Frequency of visitation

Yet, despite its central role, tax policy is rarely considered by lawmakers – in Florida or elsewhere – as a key driver of policy decisions. Notably, in Florida, the state's tax policy on racinos was initially criticized as being developed to thwart success. In our experience, it is not unusual for lawmakers to adopt a variety of policies that, intentionally or not, limit the growth of casinos and inhibit investment. Such policies range from requiring casinos to "float" on waterways, regardless of their navigability or whether they float in rivers or in artificial moats, to loss limits or admission fees.

Historically, tax policy has been largely driven by political considerations, with pro-gaming lawmakers establishing rates designed to secure the votes of fellow lawmakers. That pattern can be traced back to 1976, when New Jersey set the tax rate on the future casino industry in Atlantic City at 8 percent, a rate that was established to be higher than the rate in Nevada, which at the time was the only state with legal casinos.

Exceptions have arisen in recent years, most notably in Massachusetts, where the minimum tax rate is 25 percent, in line with that state's goal of developing destination resorts. Still, the long-term trend has been – and remains – to view tax policy through a political prism. That, in our experience, represents a lost opportunity.

Tax policy can be a powerful tool to shape and advance public policy but must be understood within the proper context.

a. Optimization

There is no one tax rate that would be considered optimal for the gaming industry as a whole, or even within a state or region. Tax policy should be viewed in its broadest context: The optimal rate for any state, or particularly for any facility, is the rate that generates the greatest level of well-planned capital investment. Such investments, in turn, generate additional employment and visitation. These factors further fuel revenue generation in different areas, such as sales taxes. If planned well, tax policy that is designed to encourage capital investment can also advance policies, such as tourism promotion that would further advance other policies and economic interests.

Spectrum summarized this observation in a 2008 peer-reviewed white paper that we produced for the National Tax Association:[81]

> Operators that are considering initial or subsequent capital investments in gaming properties will examine a variety of factors, but will likely examine a range of potential scenarios through the prism of an economic model.
>
> Operators would potentially use such a model to determine feasibility if the NPV – the present value of future cash flows, discounted by an appropriate rate – is positive, or if the IRR (the expected return when the NPV is zero) exceeds the weighted average cost of capital ("WACC"), which we are using as an appropriate rate. Some operators may calculate this "hurdle rate" (or discount rate[82]) as a minimum required rate that they impose on potential projects, rather than a WACC, but the results would be the same.
>
> The WACC would, regardless of market conditions, be affected by the ratio of debt to equity financing, and would be affected by the level of risk. Because equity investors assume a greater level of risk (bondholders are ahead of stockholders, for example, in the event of liquidation, among other factors), equity should be considered a more expensive form of financing.
>
> So, the WACC would increase if a project relies more on equity financing, and would increase if risk increases (translating into a required increase in return to compensate investors for that enhanced risk).
>
> It should be no surprise that the tax rate – which is based on top-line gaming revenue and must be paid regardless of whether a property is profitable or not – is a critical factor in determining the viability of projects or the potential return on investment in such projects.
>
> Many factors could impact the potential IRR of a project, from the potential Earnings Before Interest, Taxes, Depreciation and Amortization ("EBITDA") to the projected construction cost and the cost of capital, but tax rates – while they are often determined by a purely political calculus – play a material, meaningful role in decisions by managers as to how best to deploy available capital.
>
> Just as important, tax rates are a key determinant in establishing what type of business model a casino operator will adopt.
>
> The employment factor – and the taxes and increased economic activity generated by employees – should be paramount when policymakers are considering tax rates. By definition, a well-capitalized property with multiple amenities will employ more people than a smaller, convenience-based property with fewer amenities.

On a surface level, it might appear that the optimal tax rate would be the lowest, since a lower tax rate would increase an operator/developer's return on investment, which would a justify

[81] Spectrum's peer-reviewed white paper, "Casino Tax Policy: Identifying the Issues that Will Determine the Optimal Rate," was released at the National Tax Association 103rd Annual Conference on Taxation, held in Chicago in 2010. Thomas A. Garrett, assistant vice president of the Federal Reserve Bank of St. Louis, reviewed the report and led a discussion on its findings.

[82] Discount rate equates to the rate of return required to take on the risk of operating the business.

a greater capital investment. However, that is an overly simplistic analysis. Other factors can limit either the ability or the willingness of an operator to invest capital in a project. Such factors can include:

- An operator's existing leverage ratios, as well as its cost of capital.
- The present and future market conditions, including the competitive landscape, as well as the number of adults within relatively easy access of a location.

On the other hand, the assumption might be that the highest level that can be imposed on an operator, without forcing that operator out of business, might be ideal. In our experience, that does not translate into the optimal rate if lawmakers are considering the benefits from multiple revenue streams, including sales taxes. The highest rate would limit the operator to a business model that relies on minimal capital investment while largely targeting only the nearby, drive-in market.

So, while the highest tax rate available might not be ideal, neither should policymakers assume that simply lowering the rate will attract the necessary capital investment. A critical factor that Florida policymakers may consider when evaluating the tax structure is the notion that operators may simply elect to take advantage of a competitive, attractive tax rate by investing elsewhere. Even though a high tax rate may discourage investment in a particular project that does not mean that a lower tax rate will encourage investment.

Operators – particularly those with the willingness and wherewithal to invest in multiple properties across jurisdictional lines – will weigh such options against each other, with the likelihood that the options that offer the highest IRR will secure the investment dollars.

That possibility, however, does not mean that policymakers should not endeavor to seek an optimal tax rate, however elusive that may be. Rather, it suggests that current and potential operators need to justify lower tax rates, to view them in the context of a quid pro quo.

A system in which only operators that can justify lower tax rates by promising certain levels of investment and employment would certainly increase the likelihood of realizing such levels of investment and employment. Essentially, that is one of the core principles behind the Massachusetts gaming statute. The gaming tax rate was set at a floor of 25 percent, but bidders for licenses have the option of offering higher tax rates, or license fees in excess of the minimum $80 million.

Under such a system, regulators would weigh competing bids on a variety of factors, including which bidders are more likely to generate the greatest overall economic benefit. Policymakers cannot assume that, in such competitive bidding situations, that all applicants will seek the lowest tax rate. Indeed, it is possible – some might argue that it is likely – that some bidders will suggest a higher tax rate, believing that a higher tax rate will prove more attractive to the decision-makers.

That could mean, in a state such as Massachusetts, that different operators will be operating in different regions under different tax rates. Such a scenario – whether in Massachusetts, Florida or elsewhere – raises more issues that must be considered, including tax parity.

When states endeavor to find an optimal rate by lowering existing rates (as occurred in Florida), it is usually greeted favorably by operators and investors. When rate increases are imposed, or even considered, the opposite effect occurs, sometimes in dramatic fashion.

For example, Spectrum noted the aftershocks that occurred when a potential tax increase was considered in New Jersey 10 years ago. The administration of then-Governor of New Jersey Jim McGreevey publicly suggested that it hoped to raise revenue by adjusting the tax on casino GGR in Atlantic City. The news media reported on February 4, 2003 that New Jersey was considering a 2 percent increase in casino revenue taxes.[83] By the end of the next day, the stock market value of Atlantic City casino operators had declined by $790 million.[84] The state was simultaneously considering the possibility of allowing casinos in Northern New Jersey.[85] These issues led a gaming analyst at the time to link the related market uncertainty to delays in a $475 million bond sale Trump Entertainment Resorts was considering and to wonder if it would proceed.[86]

In our experience, if New Jersey had set the tax rate at 10 percent, rather than 8 percent, in the original legislation, it would likely have had no impact on the level of capital investment and the ensuing growth (and subsequent decline) in Atlantic City revenue. The issue here was not the rate, but the projected increase, which added risk to the investment consideration. That risk translated into a nearly $800 million decline in the equity value of affected operators, which translates into a concomitant increase in the cost of capital.

b. Tax Parity

As has been noted extensively in Florida, tax parity is a concern, particularly among pari-mutuel operators. Proponents of parity as a policy suggest that an unlevel playing field – in which low-tax operators have more freedom to invest, as well as more freedom to grow market share by increasing promotional spending – is inherently unfair, and is thus bad policy. Such an argument clearly has some merit.

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[83] Laura Manserus, "McGreevey Offers a Budget With No New Taxes but Much Austerity," *New York Times*, February 4, 2003.

[84] Spectrum Gaming Group, "Examining impacts on Atlantic City of proposed tax increases, VLT competition," April 2003.

[85] Trump Entertainment Resorts Funding, Inc., Form 10-K (filed March 31, 2003), pp. 7-8, http://www.sec.gov/Archives/edgar/data/943322/000095013003002754/d10k.htm.

[86] Joe Weinert, "$475m. Question Still Lingers: Can Trump Refinance? / Bonds Are Becoming An Even Tougher Sell," *Press of Atlantic City*, February 26, 2003, p. B6.

However, another argument for maintaining parity may be equally meritorious but gets little attention: the notion that disparate tax rates can create conflicting state policies. Such conflicts are more readily apparent in states that house both commercial and Indian casinos, although this issue is not limited to such states. In our experience, the policy conflicts are readily apparent in a state such as Iowa, where commercial casinos are taxed but Indian casinos are not.[87] This sets up a situation in which the state has a clear, abiding interest in shifting revenue from tribal to commercial casinos.

Due to revenue-sharing, as part of the compacts negotiated with tribes, the contrast is less apparent and, consequently, less acute in Florida. But it exists nonetheless. Within the existing gaming landscape in Florida, when consumers make a choice between playing slots at a racino in Broward County or at the Seminole Hard Rock, the state may gain or lose, depending on the choice. As racinos are taxed at a higher rate (35 percent) than the agreed revenue-share percentage at the Hard Rock, the state gains a larger share of that player's losses and, as a result, lawmakers might be more inclined to pursue policies that favor the racinos. This perceived differential in revenue could be offset by the argument that, in this example, the Hard Rock has a larger employment base and is more likely to bring in gamblers from outside Florida. Such suggestions are more difficult to quantify, however, and might not be as effective with other examples, such as, say, contrasting the Miccosukee properties with racinos.

Various states have elected to set differing tax rates on slots and tables, typically about 35 percent on slots and 14 percent on tables. In Connecticut, the compacts negotiated between the state and the two tribal operators set revenue-sharing at 25 percent on slots, and 0 percent on tables. The view, correct in our judgment, is that tables are more labor intensive and thus have lower margins, which would justify a lower rate. However, we point out that the concept of different rates on tables and slots is relatively new and is largely a product of ever-rising rates, which have already reached the point in existing and previous slots-only markets of being unworkable as an effective rate on tables.

As Florida contemplates an expansion of gambling through the authorization of additional destination casino resorts, the tax implications regarding rates on GGR are complex. For example, here is a potential policy conundrum that could accompany such a debate:

- If rates on destinations are set lower than racino rates, should racinos be granted parity with the lower rates?
- If not, will that give destination resorts an unfair competitive advantage?

[87] As entities owned by sovereign Indian nations or tribes, Indian casinos are not subject to state tax. Many Class III Indian casinos participate in a revenue-sharing agreement with their host state (i.e., through a compact), which from a competitive standpoint equates to a tax on GGR. Class II Indian casinos typically do not participate in revenue-sharing with their host state.

- If not, will it potentially create a situation in which any cannibalization of racino revenue by destination resorts result in an opportunity cost for the state (which would have lost the opportunity to realize a greater percentage by having that money taxed at the racino rate)?
- If so, would this simply allow the racinos to be competitive, or could it potentially result in a relative windfall to racinos that are able to maintain something close to their present revenue levels?
- If so, would racinos potentially use the extra funds that result from a lower tax rate to make investments outside Florida? In other words, would Florida simply be cutting the rate for the benefit of other states and/or outside investors?

This is not the first time that Florida has confronted such a situation, as such a debate would to some degree be a replay of the discussion that took place after reducing the racino tax rate from 50 percent to 35 percent in 2010, following the successful negotiation of a Compact with the Seminole Tribe.

The issues are not precisely parallel, however. The previous tax rate of 50 percent on racino revenue was arguably onerous to the point of being potentially confiscatory, particularly when such taxes are coupled with the effective-tax contributions imposed on racinos through the agreements they negotiate with their respective pari-mutuel stakeholders.

A 35 percent tax rate is significantly less onerous, but as a number of racino operators have pointed out to us, the combined taxes and pari-mutuel obligations make it difficult to realize an acceptable return on investment, particularly one that would justify additional capital investment.

One possible means of addressing the issue of parity at a lower rate would be to have any destination casino operators pledge to make up any shortfall realized by lowering the rate on racino operators, a concept that was floated during the recent debates on authorizing new destinations.

That may not entirely address the issue, however. It would not encourage more capital investment and could actually discourage such investment. Consider a situation in which one or more racino operator shifts resources to other investments outside Florida, which would be more achievable with a lower tax rate. If destination casino operators make up that tax shortfall, it would add to their own economic burden, creating a new expense that would impact their own bottom lines and any potential returns on future investment. Thus, if one side of the equation makes investments outside Florida while the other makes fewer investments, the state is not made whole – even if its tax revenues do not decline year over year.

Notably, the issue of tax parity between commercial and tribal operators may never be resolved, as it is largely unresolvable by design. Both the Indian Gaming Regulatory Act and federal case law make it clear that states lack either the authority or ability to tax tribal gaming operations. Compacts such as that negotiated in Florida, as well as elsewhere in the country, allow for revenue sharing in exchange for something of value from the state, such as exclusivity.

Absent such agreements, tribes that meet federal requirements can provide the same offerings as state without any need to share revenue. Thus, if tribes and commercial operators compete with the same offerings, there can never be tax (i.e., cost) parity, unless the commercial operators are freed from any tax obligations, which is not likely to occur in any gaming state.

The other issue with respect to tax parity is the concern expressed by pari-mutuel operators with regard to any potential decoupling of gaming from pari-mutuel: Such an action would appear to give some pari-mutuel operators – those that do not have the added burden of funding pari-mutuel operations – a distinct advantage. That tax advantage can translate into more competitive facilities, as well as greater ability to increase promotional spending to gain market share.

As we noted in our first report to the Florida Legislature, the status quo in racinos is hardly ideal and has led to business decisions that likely would not have been made in the absence of the present tax structure. We reported on pages 38-39:

> In addition to the prospects of cardroom and casino revenue, a jai alai license can be transferred or leased to another operator. The courts are currently reviewing whether a jai alai permit can be converted into a greyhound or racing permit. The bottom line is that jai alai permits are being issued and sought due to reasons that have nothing to do with the profitability of jai alai. Indeed, the jai alai sector as a whole sustained an operating loss of $14 million in FY 2012.[88]
>
> So why do the subsidies for jai alai endure? The elimination or reduction of jai alai subsidies would give casinos tied to frontons an unfair advantage over casinos tied to other forms of pari-mutuel wagering. The same arguments could be made for dog racing as well. If dog racing and jai alai were allowed to "decouple" their pari-mutuel operations from their gaming operations, this would effectively lower their overall obligations, the effective tax rate they now pay. By having a lower effective tax rate, this would eliminate parity with the pari-mutuels that are not decoupled, and any potential for eliminating parity can be expected to generate opposition. So, the subsidies endure because their presence helps ensure that all pari-mutuels pay a similar effective tax rate.
>
> As a result, the current stalemate is perpetuated, and policymakers are not encouraged by the industry to address issues that could arguably advance public policies, such as the possibility of shifting some revenue-sharing that now goes to various forms of pari-mutuel wagering to general revenues.

c. Identifying Options

The Florida Legislature has several options with regard to tax policy, including:

[88] Spectrum review of annual audited financial statements submitted by jai alai operators to PMW.

- Status Quo: This option would perpetuate the current situation in which lawmakers would continue with the present tax structure, recognizing that tax rates – and revenue-sharing arrangements with tribes – were not necessarily established based on economic considerations as to what would generate the most capital investment as well as the highest level of tax revenue. Aspects that are viewed as fair, and those that are viewed as unfair and counter-productive, would remain in place.
- Lower tax rate for future casino destination resorts: This option would meet the need for future operators to have a competitive rate that would justify significant capital investments in new properties, but would make racino operators less competitive, threatening the existence of some and reducing the likelihood that such operators would invest further in their properties.
- Create parity by lowering tax rate and/or decoupling for existing racinos: This option could be a significant boon to racino operators, as it would instantly boost their bottom lines and potentially justify more investment in existing gaming properties. It also would not violate the terms of the Seminole Compact, thus minimizing the risk of altering that revenue stream. Any move toward decoupling would add economic efficiency as well, by removing any pari-mutuel operation that cannot operate as a going concern through its own business model. This likely would be a death knell for jai alai and greyhound racing but would also have a severe impact on many horse-racing operators and their support system. This option also could create a scenario in which one or more racino operator elects to invest its increased cash flow into opportunities outside Florida.
- Require existing and future operators to justify a competitive tax rate: As no one optimal tax rate can fit all scenarios, or cover all gaming properties, a policy that allows existing or potential operators to put forth why a particular tax rate is optimal offers some significant benefits. For example, in a competitive bidding situation – as described in Massachusetts, and as might govern a competitive process for casino resort destination licenses in Florida – bidders can provide details as to how much they intend to invest, how they will deploy that capital, and how they identify the optimal rate for their property. In such instances, the analysis would cover the economic impact and accompanying tax revenue from a variety of sources. As envisioned in a competitive bidding situation, operators would be required to make the necessary promised investment.

Notably, that latter scenario would not necessarily limit that concept to competitive bids, but could be applied to existing operators. As discussed, such a policy should preclude the possibility of an operator merely taking advantage of a lower rate by investing elsewhere.

Legislation that was debated several years ago in New York, which we analyzed at the time for studies we were producing, offers some level of guidance. A bill was introduced in 2008 that

would allow a 750-room casino resort in the Catskills, with a convention center and a 100,000-square-foot casino, to be built at a 25 percent tax rate, which was less than half the rate governing the state's slots-only racinos. The initial bill had the following conditions before a developer could secure the lower rate:[89]

- At least $1 billion in capital must be invested in the facility.
- At least 2,000 permanent jobs must be created.
- At least one 18-hole golf course and a convention center, among other amenities, must be built.
- The contribution to state education from the tax would increase from its then-current levels, estimated at about $19 million.

The tax was structured so that the operator would pay the lesser of 25 percent or $38 million, which was twice the amount then going to education. That $38 million would stay the same for eight years, and then could be increased under certain terms, such as the lesser of either 2 percent or the rise in the Consumer Price Index.

A year later, following the advent of the recession, the bill – which was signed into law but never implemented – was reintroduced, and was less ambitious:[90]

- The amount of capital to be invested declined from a minimum of $1 billion to $600 million.
- The minimum number of permanent employees declined from 2,000 to 1,000.
- The requirement to build a convention center was eliminated.

The new law also reflects changes to the potential increase in taxes if certain thresholds are met. For example, the previous law required that, if the employment numbers fell short by more than 50 percent from the 2,000-employee goal, the state would recapture two-thirds of the tax revenue that it would have given up as an incentive. The new bill stated that, if the employment numbers are less than two-thirds of the 1,000-employee goal, 100 percent of the foregone tax revenue would be recaptured. The revised bill had a sliding scale on that measure, down to an 11 percent recapture rate if the employment shortfall is more than 10 percent of the goal.

The New York effort – even in its less ambitious form – demonstrated the clear recognition that lower tax rates hold out the promise of being an effective incentive if:

- The operator commits to investing significant sums in the size, quality and number of amenities.

[89] Tom Wanamaker, "Legislation boosts plan for casino in Catskills," *Watertown Daily Times*, June 27, 2008. http://www.watertowndailytimes.com/article/20080627/NEWS01/556727382 and http://open.nysenate.gov/openleg/api/html/bill/A8767A.

[90] http://open.nysenate.gov/openleg/api/html/bill/A8767A (accessed October 5, 2009) and telephone interview with New York Gaming Association (July 25, 2013).

- The operator reaches certain goals, in areas ranging from employment to revenue generation.

Effectively, such efforts can achieve ambitious goals but must be viewed in the proper context: Both the operator and the state must share common objectives and must work in tandem. The core attribute of such legislation is that the operator is not merely entitled to a lower, more attractive tax rate – that rate must be earned through the development and achievement of ambitious goals.

d. Conclusion: Uniform Optimization in Tax Rates Remains Elusive

When endeavoring to identify the ideal tax rate, lawmakers must recognize that no one rate can work in all instances as being optimal. There are simply too many factors and moving parts that would allow Florida legislators to pinpoint one rate that fits everyone, and such factors would include but not be limited to:

- Location
- Access
- Business model
- Type of offering that is allowed (slots, tables and limits on type of table games)
- Operator's cost of capital

But while the ideal rate itself may be a changing target, the goal is fixed and immutable: What is the rate that will generate the most capital investment, and the attendant level of employment, tourism promotion and other goals?

We also re-emphasize that a property operating under an ideal rate – even if that rate is lower than what might otherwise be allowed – can, if structured and managed properly, generate greater levels of revenue than might otherwise be expected.

2. Applying the Pennsylvania Model

While the previous section made clear that no one optimal rate can be identified that would maximize revenue for Florida in all instances among all operators, we can still look to other states for examples as to how they endeavored to maximize revenue. One example is Pennsylvania.

There are 11 casinos in Pennsylvania, with the first opening in November 2006. These 11 casinos are located throughout seven metropolitan statistical areas in the state. However, the two most populous metropolitan areas (Philadelphia and Pittsburgh) have multiple casinos and are home to six of Pennsylvania's 11 casinos.

In 2012, Pennsylvania casinos generated $3.8 billion in GGR, ranking second behind only Nevada among the 23 state-regulated jurisdictions.[91] However, Pennsylvania easily ranked first in GGR tax revenue collected, at $1.49 billion (vs. $869 million for Nevada). Additionally,

[91] Spectrumetrix US Gross Gaming Revenue Analysis (a product of Spectrum Gaming Group).

Pennsylvania's GGR tax collection figure was four times the average of $374 million per state and more than five times the median value of $273 million.

The effective GGR tax rate in Pennsylvania was 39.1 percent in 2012 (which ranked sixth of the 23 states reported). Pennsylvania's GGR tax structure differs based on revenue component, as follows.

- The effective GGR tax rate on slot revenue was 54 percent, which is applicable to net slot revenue (i.e., net of promotional credits or plays) – while the effective rate on gross slot revenue was nearly 44 percent. As a percentage of net (or taxable) slot revenue, the following was the breakout:
    - State tax at 34 percent
    - Local share assessment at 4 percent
    - Pennsylvania Gaming Economic Development and Tourism Fund at 5 percent
    - Remainder, or 11.1 percent, to Pennsylvania Race Horse Development Fund
- The effective GGR tax rate on table games revenue was 15.4 percent, applicable to gross table games revenue. This was broken into two components:
    - State tax at 14 percent for the first two years following commencement of table games operations at each location. After the initial two years, the tax rate drops to 12 percent. However, fully automated electronic table games were taxed at 48 percent.
    - Local share assessment at 2 percent

We believe a big part of the success of the Pennsylvania casino industry (as measured by GGR and resultant tax revenue collected) is the strategic planning applied to the location of casinos (i.e., geographically distributed in, or nearby to, major population centers along with exclusivity zones) coupled with two distinct GGR tax structures, recognizing the differing business models and constraints associated with GGR stemming from either slot or table games revenue.

Under certain casino gaming expansion scenarios provided by the Florida Legislature, we believe the Florida gambling landscape would share some synergies with the Pennsylvania gambling landscape, as we consider the following:

- Pennsylvania has an adult population of 9.43 million (which translates into a ratio of 65 percent of Florida's adult population).

- Florida (at 17.3 percent) has the nation's highest percentage of 65-and-older adults within its total population, while Pennsylvania (at 15.4 percent) is fourth, according to the 2010 census.[92]
- In Pennsylvania, four out of five adult residents (83 percent) are within a reasonable one-hour drive time of a Pennsylvania casino, while over half of Pennsylvania adults (53.2 percent) live within a reasonable 30-minute drive time from a Pennsylvania casino. Conversely, only 2 percent (177,200) of Pennsylvania adults live beyond a two-hour drive time from any casino in the state.
- Currently, of the existing 15 casinos in Florida, 56 percent of Florida adults are within a one-hour drive of a Florida casino. However, under the expansion scenario with 20 additional pari-mutuels (or casinos) throughout Florida (and at their current locations) 97.1 percent of Florida adults would be within a one-hour drive of a Florida casino. Additionally, under this scenario, nearly all Florida adults (at 99.8 percent) would be within a two-hour drive of a Florida casino.

We must note certain caveats as well:

- Many Pennsylvania casinos are placed near the state's borders, where they draw significant revenue from neighboring states. That cannot be replicated in Florida, a peninsula where population centers are situated far from the few state borders.
- Pennsylvania does not have a tourism industry that is as large, or economically important, as Florida's.

O. Leveraging Gaming Revenue Streams for Public Funding

In this section, we evaluate the economies of leveraging the revenue stream provided by gaming as sources for public funding of education, transportation, underwriting risks associated with a catastrophic hurricane event in Florida, and other public funding needs.

State and other taxing entities occasionally have utilized gaming-related revenues to issue municipal and similar debt offerings. Among those, lottery-backed bonds have been successful. While, in general, the benefits of such issuances are the ability to raise and dedicate a large and impactful sum of money, such issuance has been infrequent across the country and can be controversial. For the few such deals that have been completed, and for some of those contemplated, there often were significant controversies around gaming revenue as an unsuitable financing source, or the project being funded as unsuitable for public funding.

The appeal of issuing tax-exempt bonds backed by the revenue of a newly constructed casino is that it enables the government entity to procure future gaming tax revenue immediately,

[92] "Senior Citizen Population by State," http://usliberals.about.com/od/Election2012Factors/a/Senior-Citizen-Population-By-State.htm (accessed August 8, 2013)

in one lump sum, which could provide substantial public impact. A municipal bond issuance can be an effective and expedient way to provide funding for such needs as school construction, transportation or other infrastructure; to mitigate underwriting risks associated with a natural disaster; or simply to plug a hole in the coming years' budget. Large, upfront funding also could compel later utilization of funds for the planned purpose (i.e., via debt service and debt retirement) so that the tax revenues do not later get diverted via the political process to other budgetary exigencies.

There are several drawbacks to such financing as well. For a state like Florida that has an Aa1 rating and most recently issued lottery bonds at a coupon rate of 5 percent (which translates into an effective rate of 2.75 percent on those bonds), a gaming-based Revenue Bond might not generate a higher rating.[93] Depending on the degree of state support, the rating might even be lower and the cost to the state higher.

Gaming revenues are sensitive to swings in the economic environment, as gaming is a highly discretionary form of entertainment. This contrasts to staples such as food, clothing and health-related products, or discretionary items with a long shelf life such as spending for home improvements, electronics and sporting goods. Since state governments have legalized gaming in order to establish an ongoing revenue stream to the state for the life of the gaming facility, issuing a tax-exempt bond means that future gaming revenue taxes would be pledged for debt service for the duration of the bond, at the expense of other future uses.

Following is what Spectrum believes is a comprehensive list of tax-exempt bonds backed by gaming revenues since 2005:

[93] State of Florida issuer page, Moody's Investors Service, https://www.moodys.com/credit-ratings/Florida-State-of-credit-rating-600024224

Figure 91: Tax-exempt gaming revenue-backed bond issuance, 2005-2012

Issuer	Bond Name	Date of Issuance	Amount	Interest Rate	Fixed/ Variable	Credit Rating	NA or Government	Maturity	Revenue Pledge
Seminole Tribe	Series 2007A Special Obligation Bonds	2007	$113	5.25%	Fixed	Ba1	Native American	2027	Gaming
Seminole Tribe	Series 2007A Special Obligation Bonds	2007	$60	5.75%	Fixed	Ba1	Native American	2022	Gaming
Seminole Tribe	Series 2007A Special Obligation Bonds	2007	$66	5.50%	Fixed	Ba1	Native American	2024	Gaming
Seminole Tribe	Series 2007B Special Obligation Bonds	2007	$219	7.80%	Fixed	Ba1	Native American	2020	Gaming
Seminole Tribe	Series 2008A Special Obligation Bonds	2008	$105	8.03%	Fixed	Ba1	Native American	2020	Gaming
Seminole Tribe	Series 2010A Tax Exempt Bonds	2010	$37	5.13%	Fixed	Baa3	Native American	2017	Gaming
Cabazon	Series 2003A Revenue Bonds	2003	$111	NA	Fixed	NA	Native American	NA	Gaming
Cabazon	Series 2003B Subordinate Revenue bonds	2003	$35	NA	Fixed	NA	Native American	NA	Gaming
Oregon	Lottery Revenue Bonds Series 2009A	4/2/09	NA	5.00%	Fixed	Aa2	Government	4/1/2019	Lottery
Oregon	Lottery Revenue Bonds Series 2009D	12/09	NA	5.00%	Fixed	Aa2	Government	4/1/2015	Lottery
Oregon	Lottery Revenue Bonds Series B	4/25/12	$74	4.00%	Fixed	Aa2	Government	4/1/2016	Lottery
CRDA	$236M Parking Fee Revenue Bonds	2005	$236	5%-5.25%	Fixed	Baa2	Government	2018-2025	Gaming
Detroit	Swap continuation agreement	2009	$400	5.67%	Fixed	NA	Government	2035	Gaming
Florida	Lottery Revenue Bonds Series 2005A	2/15/05	NA	4.38%	Fixed	A1	Government	7/1/2023	Lottery
Florida	Lottery Revenue Bonds Series 2006A	4/1/06	NA	5.00%	Fixed	A1	Government	7/1/2016	Lottery
Florida	Lottery Revenue Bonds Series 2006B	10/1/06	NA	5.00%	Fixed	A1	Government	7/1/2016	Lottery
Florida	Lottery Revenue Bonds Series 2007A	7/1/07	NA	5.00%	Fixed	A1	Government	7/1/2017	Lottery
Florida	Lottery Revenue Bonds Series 2007B	12/1/07	NA	5.00%	Fixed	A1	Government	7/1/2015	Lottery
Florida	Lottery Revenue Bonds Series 2008A	4/15/08	$315	5.00%	Fixed	A1	Government	7/1/2023	Lottery
Florida	Lottery Revenue Bonds Series 2008B	7/15/08	NA	5.00%	Fixed	A1	Government	7/1/2023	Lottery
Florida	Lottery Revenue Bonds Series 2009A	3/1/09	NA	4.50%	Fixed	A1	Government	7/1/2017	Lottery
Florida	Lottery Revenue Bonds Series 2010A	3/11/10	NA	5.00%	Fixed	A1	Government	7/1/2017	Lottery
Florida	Lottery Revenue Bonds Series 2010B	3/11/10	NA	5.00%	Fixed	A1	Government	7/1/2017	Lottery
Florida	Lottery Revenue Bonds Series 2010C	3/11/10	$300	5.00%	Fixed	A1	Government	7/1/2017	Lottery
Florida	Lottery Revenue Bonds Series 2010D	9/2/10	NA	5.00%	Fixed	A1	Government	7/1/2016	Lottery
Florida	Lottery Revenue Bonds Series 2010E	9/30/10	$223	5.00%	Fixed	A1	Government	7/1/2017	Lottery
Florida	Lottery Revenue Bonds Series 2010F	11//10	$174	5.00%	Fixed	A1	Government	7/1/2019	Lottery
Florida	Lottery Revenue Bonds Series 2011A	9/29/11	$226	4.00%	Fixed	A1	Government	7/1/2023	Lottery
Florida	Lottery Revenue Bonds Series 2012A	12/6/12	$90	5.00%	Fixed	A1	Government	7/1/2023	Lottery

Source: Fidelity.com, Moody's Investors Service, municipalbonds.com, Division of Bond Finance.

What follows is an analysis of municipal bond issuance backed by different forms of gaming revenue.

1. Background[94]

Issuing municipal bonds remains an attractive form of financing for state and local governments, like Florida, mainly due to the bonds' tax-exempt status. Because the interest earned by bondholders is not taxable, investors in municipal bonds will accept interest rates lower than for a comparable corporate bond, for which the interest income is taxable. Amortization schedules can be lengthier for tax-exempt bonds, typically ranging from 20-30 years. In order for a government to issue tax-exempt bonds, the use of proceeds is required to be for an essential government function, such as building and maintaining schools, streets, highways, bridges, hospitals, utilities and other public projects.

There are two main types of tax-exempt bonds: 1) General Obligation Bonds, in which principal and interest payments are secured by the full faith and credit of the issuer and supported by the issuer's taxing power; and 2) Revenue Bonds, in which principal and interest are secured by the underlying project or revenue source.

Notably for purposes of this report, both the Seminole Tribe of Florida (as noted in our first report) and the state of Florida have earned investment-grade ratings on their debt. About one month ago, Fitch Ratings affirmed AAA ratings on Florida's general obligation bonds and AA+ ratings on its "appropriations backed" bonds, while revising the overall outlook from "negative" to "stable."[95]

Among other factors, Fitch cited the state's financial management practices and its long-term economic outlook as factors supporting the strong rating. Fitch wrote:

> The Florida economy has been characterized by rapid growth, economic broadening, and diversification as it was transformed from a narrow base of agriculture and seasonal tourism into a service and trade economy, with substantial insurance, banking and export components. Florida's poor economic performance in the downturn and its slow recovery from the recession largely reflect the state's severe housing market correction following an historic run-up. The housing market is improving, although prices and housing starts are still well below pre-recession levels. The homeowner vacancy rate is declining and construction activity has resumed, with housing starts on track for much faster growth. Foreclosure activity remains much higher than the national average but is down substantially from its peak.
>
> Strong underlying fundamentals remain, including a relatively low cost of living, attractive tourist and retirement destinations, and favorable geographic location. The state's natural amenities include 2,200 miles of tidal shoreline, proximity to Latin American and

[94] Michael Johnson, "The Basics Of Municipal Bonds," MunicipalBonds.com, July 1, 2013; http://www.municipalbonds.com/education/read/250/the-basics-of-municipal-bonds/.

[95] "Fitch Affirms Florida GO Bonds at 'AAA'; Outlook Revised to Stable," August 23, 2013 http://www.marketwatch.com/story/fitch-affirms-florida-go-bonds-at-aaa-outlook-revised-to-stable-2013-08-23

Caribbean markets, and the presence of some of the world's most popular tourist destinations, large convention venues, and major cruise ship ports.[96]

In general, in this report, we are reviewing Revenue Bonds which are tied to state tax receipts from gaming operations.

2. Lottery – The Strongest Credit

Lottery revenues have been used by several states to raise funds in municipal bond offerings. The states of Florida and Oregon have issued tax-exempt bonds backed by lottery revenue proceeds, which have been well-received in the market.[97] Oregon issued $160 million of tax-exempt bonds in 2011 for the purpose of funding state projects, to fund interest reserve accounts for other outstanding bond deals and for general governmental purposes. The bonds were issued at an interest rate of 5 percent with a long maturity profile and, in this context, they were considered very low risk by the rating agencies. At the time, Moody's and Standard & Poor's, the rating industry leaders, rated these securities Aa2 and Aaa, respectively. Characteristic of any revenue bond is the collateral pool of pledged revenue that backs the principal and interest payments. Lottery bonds are backed by lottery revenue, less operating expenses and prize payouts.[98]

The credit quality of lottery-backed bonds is considered strong. This is because the lottery revenue stream is considered to be stable, as it is believed to be minimally affected by competition from other gambling-related activities or economic recession. Credit weaknesses cited by Moody's include the lottery's dependence on game diversity, steady introduction of new games and expansion of the lottery in neighboring states.

In the case of Florida, Fitch Ratings cited similar factors – as well as solid debt service coverage and strong management – in assigning an A+ rating to the lottery revenue bonds issued last year.[99] Fitch noted that Florida "has covenanted that any other similar state gaming revenues would be first applied to debt service on lottery revenue bonds. Specifically, the state legislated in 2006 that any revenue derived from the tax on slot machine revenues, although not directly pledged, shall first be available to pay lottery revenue bond debt service in the event that lottery revenues prove insufficient. This provision applies to revenues generated by the slot machines at

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[96] Ibid.

[97] Brian Chappatta, "Lottery Securities Beating AAA Provide Winning Bet," April 16, 2012; businessweek.com; http://www.businessweek.com/news/2012-04-16/lottery-securities-beating-aaa-provide-winning-bet-muni-credit.

[98] "State of Oregon Department of Administrative Services Oregon State Lottery Revenue Bonds," Oregon Lottery Revenue Bonds official Statement, March 13, 2011.

[99] "Fitch Rates Florida's $88MM Lottery Revs 'A+'; Outlook Stable," October 24, 2012 http://www.businesswire.com/news/home/20121024006650/en/Fitch-Rates-Floridas-88MM-Lottery-Revs-Outlook

pari-mutuel sites in Broward County since 2006, as well as revenues from Miami-Dade County, which voted in 2008 to allow slot machines at three pari-mutuel sites, the first of which opened in October 2009."[100]

In the case of the Oregon Lottery, debt service had increased as a percentage of total lottery revenue, due to a decline in net revenue in 2010. The complication that surfaces with such a drop in net revenue is that the lottery revenue not pledged for debt service is already earmarked for other funding needs of the state. To deal with this funding issue, the terms of the bond offering requires the State of Oregon to contribute 50 percent of first quarter net revenues to the debt service account with the remaining 50 percent transferred to other funding needs. The remaining debt service shortfall is funded in the next quarterly revenue transfer. This mitigates the risk of having inadequate funds to pay debt service due to funding other projects that are budgeted at the beginning of the fiscal year. Overall, lottery bonds have the best credit profile among the gaming-related revenue issuance that we analyzed.[101, 102]

3. Other Gaming Revenue as Form of Collateral

a. Atlantic City, NJ

Gaming revenues were used indirectly by the New Jersey Casino Reinvestment Development Authority ("CRDA") to issue Revenue Bonds. The CRDA's purpose is to govern the uses of the capital contribution the state receives from the city's 12 casinos. In March 2005, the CRDA issued $107.1 million in tax-exempt bonds with interest rates ranging from 5 percent to 5.25 percent and a rating of Baa2. Use of proceeds was to refinance non-taxable bonds outstanding, the financing of Boardwalk revitalization programs including property acquisition, façade improvements, parking facilities, new retail and dining venues and other economic projects in Atlantic City.[103] Maturities for the recent issuances range from 2018-2025, making them 15- to 20-year bonds. These bonds are backed by two distinct sources of revenue:

- Parking Revenue: Paid at each of the 12 Atlantic City casinos by patrons (or paid by the casino if they provide complimentary patron parking).

[100] Ibid.

[101] Kimberly Lyons, "Moody's assign Aa2 rating to $184 million Oregon Department of Administrative Services Oregon state lottery revenue bonds series 2011," Moody's Investors Service, March 9, 2011; https://www.moodys.com/research/MOODYS-ASSIGNS-Aa2-RATING-TO-184-MILLION-OREGON-DEPARTMENT-OF-New-Issue--NIR_16852433.

[102] Chris Morgan "Summary: Oregon, Oregon Department of Administrative Services; Miscellaneous Tax," Standard & Poor's, March 11, 2011.

[103] New Jersey Casino Reinvestment Development Authority annual report 2008; http://www.njcrda.com/uploads/1/1/6/5/11659441/2008finalaudit.pdf.

- Investment Alternative Tax ("IAT"): Each Atlantic City casino contributes 1.25 percent of gross gaming revenue to the CRDA pursuant to legislation passed in 1984.[104]

According to a Moody's report in April 2013, approximately 71 percent of the revenue pledged to cover debt service is sourced from parking receipts and 29 percent is sourced from gaming revenue. The Atlantic City casinos have entered into credit agreements that pledge the IAT to provide security/collateral to these bond issuances. These funds are paid to the CRDA, as issuer, to fund their debt service.

The credit discussion in Moody's research about this issuance is centered on the declining performance of the Atlantic City gaming market. Declines to GGR means the dollar amount of the IAT is also decreasing (parking revenue did not decrease because Atlantic City had a new casino, Revel, open that year). This results in a narrowing of the level of debt service coverage that the CRDA can provide to bondholders. Additionally, the rating agencies focused on the fact that all of the revenue backing this issuance is sourced from a limited geographic region. In a region where all of the casinos are in close proximity to each other, like Atlantic City's Boardwalk and Marina District, the entire collateral pool is vulnerable to downturns in the local economy or from increased competition nearby.[105] Although the CRDA debt has not been downgraded, it does have a negative outlook.

At the time that the CRDA contribution laws were passed, public sentiment centered on the fact that Atlantic City was going to be the sole beneficiary in the state of the infrastructure improvements that are funded by these bonds. As a result, a portion of the IAT and parking revenue funds that back tax-exempt CRDA bonds is deployed in other parts of the state.[106]

b. Detroit, MI

Another example of a government entity using gaming revenues to address its financing needs is the City of Detroit. In 2006, Detroit entered into swap agreements with two financial institutions as counterparties for the purposes of mitigating interest rate risk on the city's $948 million Retirement System Funds issuance. A condition of that agreement was that the City had to maintain its investment-grade credit rating.

In January 2009, Standard & Poor's lowered Detroit's BBB investment grade rating to BB, which is in the speculative grade category. This move triggered a counterparty request to terminate

[104] Casino Reinvestment Development Authority annual report 2012; http://www.njcrda.com/wp-content/uploads/CRDA.12.31.12.-financial-statementspdf.pdf.

[105] Josellyn Yousef, "Moody's confirms Baa2 rating on Casino Reinvestment Development Authority's (NJ) $236 million Parking Fee and Atlantic City Fund Revenue Bonds outstanding, Series 2005A and 2005B," Moody's Investor Service, March 22, 2013; https://www.moodys.com/research/Moody's-confirms-Baa2-rating-on-Casino-Reinvestment-Development-Authoritys-NJ--PR_269436

[106] August 9, 2013, interview with Josellyn Yousef, Lead Analyst, Public Finance Group, Moody's Investors Service.

the swap pursuant to the 2006 swap agreement terms. The breakup fee cost to the City was to be approximately $400 million.

Given Detroit's financial troubles at the time, the City arranged for a different solution to maintain its swap agreement and avoid having to pay the breakup fee. Detroit pledged the gaming tax revenue it would generate from its three commercial casinos as a collateral/guarantee backing the annual swap payment. The city also agreed to a $50M annual payment to the counterparties, a payment that is based on a 5.67 percent interest rate to maintain the swap agreement. The maturity of this agreement was 2035 (25 years).[107] For a city in distress like Detroit, pledging gaming revenue enhanced its status as a credit and enabled it to continue the swap agreement while satisfying the counterparty needs for adequate collateral.

Although the swap payment, backed by gaming revenue, is not a bond issuance, the recent news that Detroit is declaring bankruptcy does provide insight into gaming revenue as a viable collateral pool. It has been reported in crainsdetroit.com and *The Bond Buyer* that due to the fact that the swap agreement of 2009 is backed by gaming revenue, the swap counterparty is considered a senior secured lender and "at the front of the line" of Detroit's long list of creditors. Bloomberg News reported that because the financial institution counterparty has a pledge of gaming revenue as collateral, it has the same seniority as municipal bond investors that may have invested in Detroit's sewer or water bonds.[108] If that is true, then one can argue that irrespective of the revenue source, tax-exempt bonds backed by gaming revenue should be no different than municipal bonds backed by government entities in terms of their pricing, maturities and marketability.

4. Public Reaction to Recently Proposed Deals

Spectrum found two recent instances where a municipality is planning to issue, or has contemplated issuing, bonds backed by gaming revenue – in one case to finance the acquisition and redevelopment of a casino, and in the second case, to finance the building of a stadium. Both these examples illustrate the kind of media attention and public scrutiny that gaming-backed issuances can incite due to uncertainty surrounding gaming revenue.

- **The City of Davenport:** Davenport, IA, is the home of Rhythm City Casino, owned by Isle of Capri Casinos Inc. of St. Louis, MO. Due to significant declines in gaming revenue at the property as a result of expansion to a nearby, larger casino owned by the same company, and the resultant declines in payments to the City of Davenport, the City wanted to convert the riverboat casino into a land-based property at a better location to increase profitability and payments to the city. After a disappointing initial

[107] Yvette Shields, "Cash-Poor Detroit Resolves Swaps Mess," The Bond Buyer, July 22, 2009; https://secure.bondbuyer.com/issues/118_139/-305544-1.html

[108] Bloomberg News, "Interest-rate swap firms could get paid first as Detroit bankruptcy loom," June 21, 2013. http://www.crainsdetroit.com/article/20130621/NEWS01/130629981/interest-rate-swap-firms-could-get-paid-first-as-detroit-bankruptcy

sale process, Davenport officials initiated a proposal for the city to buy the casino and move it to the land-based site.

- The City contemplated a $150 million, tax-exempt bond issuance for this project, with $50 million used to acquire the casino and $100 million for redevelopment. We interviewed Brandon Wright, the Director of Finance for the City of Davenport, who was leading the financing plan. He stated that given Davenport's A2 credit rating and that the City's last general obligation municipal bonds issuance priced at 2.8 percent, this issuance likely would cost double, at about 5.5 percent. The increased pricing was mainly due to the fact that the bond was going to be backed by gaming revenue, which was then not considered reliable, based on the riverboat location.[109, 110]

- Many politicians were staunchly opposed to a municipality owning a casino itself, much less incurring debt to finance the acquisition. In terms of the bond, the expectation of a high interest rate and general uncertainty around the level of gaming revenue that could reasonably be generated from a new land-based property brought about significant opposition to the plan. The deal never came to fruition due to the political unease, and a private developer has since taken over the project.

- **Minnesota Vikings stadium financing**: In March 2012, the City of Minneapolis and the Minnesota Vikings of the National Football League agreed to terms for building a new football stadium. The total construction cost is $975 million and the Vikings agreed to contribute $477 million, with the City of Minneapolis and the State of Minnesota committing the remaining funds. The state portion of the financing, estimated at approximately $348 million, are expected to be raised by issuing municipal bonds.

- The revenue being appropriated for the purpose of servicing these bonds over time is from tax revenues from electronic charitable gaming revenues. Charitable gaming, which has been legal in Minnesota since the mid-1980s, contributed $37 million to the State in 2011, according to the *Minneapolis Post*. The state expanded the availability of electronic gaming, including at the airport, where officials budgeted $3 million in annual revenue contribution for purposes of debt service relating to this financing. The results for the first six months of 2013 indicate that the State will be well short of its

[109] Kurt Allemeier, "Financial Experts call Davenport plan to buy casino risky," *Quad City Business Journal*, November 30, 2012; http://qctimes.com/business/financial-experts-call-davenport-plan-to-buy-casino-risky/article_c7af6bbc-3a51-11e2-88e7-0019bb2963f4.html

[110] August 8, 2013, interview with Brandon Wright, Director of Finance, City of Davenport.

projections. The electronic pull tab machines there have generated only $33,586 during that span, according to the *Star Tribune*.[111, 112, 113]

- In Minnesota, there has been a plethora of articles that question the viability of gaming revenue-backed bond issuance. The issues raised include the lack of a long history of success of electronic pull-tabs and the uncertainty of whether gaming revenue will be enough to pay principal and interest payments on the bonds. Of greatest concern is if gaming revenue is not sufficient to cover debt service, what other source of revenue would be appropriated for the purpose of paying the principal and interest on the bonds? At the time of this report, the deal is planned for September 2013 and continues to be challenged in the media.[114]

It is telling that in the case of Davenport, IA, the proposed purchase of a casino never had enough backing for it to come to fruition. The public view was that it is just too risky to leverage the casino's earnings in such a way and that it was imprudent for a city to enter the casino business. It is of no surprise to Spectrum that this deal did not get completed.

Minnesota's proposed bond deal will be an important development to watch, particularly because it appears likely to be completed. The groundbreaking is expected to take place in October 2013, and the stadium is expected to be completed for the 2016 NFL season. Given the commitment by the State to provide $348 million in financing, we believe that the State may be forced to address the underwhelming charitable gaming revenue results to date; this will be telling as to market and public reaction to gaming-based Revenue Bonds in an increasingly competitive and dilutive gaming environment.

5. Native American Issuance

Native American nations and tribes, like most state and local governments, have access to the tax-exempt bond market and have used municipal finance more extensively for gaming-related issuances. The lower relative cost of tax-exempt financing is appealing to tribes for the same reason as it is to municipalities. Tribes have access to the tax-exempt bond market for the funding of "essential government services" similar to state governments. This includes government buildings, utilities, infrastructure and schools, for example.

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[111] Minnesota Vikings website; http://www.vikings.com/stadium/new-stadium/index.html (accessed August 9, 2013).

[112] Sean Olson, "Shaky foundation for new Vikings stadium?" MinnPost, March 14, 2012. http://www.minnpost.com/minnesota-blog-cabin/2012/03/shaky-foundation-new-vikings-stadium.

[113] Jean Hopfensperger, "Airport e-gambling showing poor payoff for Vikings stadium," *StarTribune*, 8/5/2013; http://www.startribune.com/local/minneapolis/218445161.html.

[114] Ibid.

We believe a review of the tribal finance can be helpful as a reference for the State of Florida in its review of the topic because tribes have successfully accessed this market time and again. Specifically, the Seminole Tribe of Florida, owner of seven casinos in Florida, has been a prominent tax-exempt bond issuer over the last decade. The Seminole Tribe has been involved in controversial tax-exempt financings as well as successful issuances, and they continue to access the tax-exempt market today.[115] A review of its successfully completed deals can provide insight as to the value of the gaming revenue stream on a standalone basis.

In 2002, the Seminole Tribe issued $345 million in 30-year tax-exempt bonds in order to construct two resorts in Hillsborough and Broward counties. Capital Trust Agency, a state agency commissioned to, among other things, issue debt for public projects in Florida, raised the debt in the tax-exempt market and then made a loan to the Tribe. Using a third party, like Capital Trust Agency, to issue tax-exempt debt is known as conduit financing.[116]

Conduit financing was an effective way for the Tribe to obtain tax-exempt bonds, but after the fact, there was great controversy. The method by which the Seminole Tribe went about this transaction was investigated by the IRS, which was of the opinion that the financing circumvented the "essential government services" requirement. Lawyers argued that the Tribe, being the borrower not the issuer, had no bearing on the tax-exempt status of the bonds. In December 2004, the IRS mandated that the Seminole Tribe repay the tax-exempt bonds outstanding by December 2005, disallowing the tax exemption; the Seminole Tribe issued $730 million of taxable bonds to repay the tax-exempt issuance in October 2005. This prevented any further lawsuit by tax-exempt bondholders, due to the fact that pursuant to the IRS ruling, the bondholders would have to pay taxes on their interest income from what was supposed to be a tax-exempt deal.[117]

Since 2005, the Seminole Tribe has accessed the tax-exempt bond market by issuing tax-exempt "gaming division bonds." They are secured by a pledge of revenue generated by the Tribe's gaming facilities. The bonds are private placements and not registered with the SEC. The use of proceeds are for capital expenditures and improvements to the Tribe's properties as well as for

[115] Hyatt Townsend, Perry Israel, Alan Benjamin, "An introduction to Tribal Finance," Orrick Herrington & Sutcliffe, 2005; http://www.orrick.com/Events-and-Publications/Documents/246.pdf.

[116] Robert Little, "IRS Seeks Probe of $455 million Tax-Exempt Bonds Used to Build Two Seminole Hard Rock Hotel and Casino Complexes in Florida," Hotel Online, May 8, 2004; http://www.hotel-online.com/News/PR2004_2nd/May04_CasinoBonds.html.

[117] Christina Hoag, "Seminole Tribe sells $730 million in Taxable Bonds to Redeem $560 million in Tax Exempt Bonds that IRS Claims Were Improper for Florida's Hard Rock Gaming Resorts," Hotel Online, October 14, 2005; http://www.hotel-online.com/News/PR2005_4th/Oct05_SeminoleBonds.html.

general governmental purposes. The Seminole Tribe has issued six tax-exempt bonds since 2007, with rates ranging from 5.13 percent to 8.03 percent.[118, 119]

6. Covenants

Municipal issuers are bound by credit agreements and their related restrictions, just like any other issuer. A gaming-based issuance may therefore bring additional risks to the state, related specifically to the operations of the casinos. There are two types of covenants typically found in bond indentures – incurrence tests and maintenance tests. Incurrence tests are conditions that must be in place for the issuer prior to receiving any new financing. Maintenance tests are conditions that must be met by the issuer at specified times (quarterly/annually), while the bonds are outstanding, pursuant to terms and conditions set forth in the credit agreement.

In our analysis of tax-exempt issuances, we uncovered several incurrence and maintenance tests that essentially govern the issuer's ability to raise additional debt and its decision-making as to where its revenues can and cannot be appropriated. The following is a description of such covenants found in lottery-backed bonds and gaming-revenue bonds issued by the New Jersey CRDA.

- **Additional Bonds Test:** This is an incurrence test that limits the ability of an issuer to incur additional debt, such that it cannot maintain certain ratios and coverage after that debt is incurred. An example of additional bonds tests are:
    - *Historical average revenues/debt service:* A specific limit on this ratio might be an incurrence test found in a municipal bond credit agreement.
    - *Maximum debt service amount:* A credit agreement may state that an issuer can only issue debt if net revenue proceeds generated during a stated time period are at least a pre-determined number of times the maximum annual debt service on all outstanding bonds and additional bonds to be issued. Alternatively, we have seen that the municipality's revenue projections must show that net revenue proceeds that are pledged to pay debt service are equal to at least four times maximum annual debt service on outstanding and newly issued debt.
- **Revenue Appropriation Requirement:** This covenant requires that "first in" revenues must be appropriated for the purpose of funding debt service. The goal of this test is to

[118] Keith Foley, "Rating Action: Moody's raises Seminole gaming ratings to Baa3," Moody's Investors Service, September 14, 2007; https://www.moodys.com/research/Moody's-raises-Seminole-gaming-ratings-to-Baa3-new-459-mil--PR_140784.

[119] Keith Foley, "Rating Action: Moody's upgrades Seminole Tribe ratings to Baa3," Moody's Investors Service, April 2, 2013; https://www.moodys.com/research/Moody's-upgrades-Seminole-Tribe-ratings-to-Baa3-assigns-Baa3-to--PR_269885.

ensure that debt service is the first priority of payment above any other permissible use of pledged revenues.

- **Debt Service Reserve Requirement:** This is a maintenance covenant that ensures the issuer maintains sufficient funds in the reserve account to satisfy principal and interest payments on outstanding bonds. An example of such a covenant is that the issuer must maintain the lesser of the following in its debt service account: either 125 percent of average debt service or 10 percent of total bond proceeds.
- **Moral Obligation Pledge:** These are covenants where the state will pledge that it will authorize procurement of emergency funds if the reserve account falls below required levels pursuant to the bond documents.[120, 121, 122]

The covenants that deal with revenue present specific challenges when the revenue in question comes from gaming. As stated earlier, gaming revenue may not be a suitably stable revenue source, as it is a highly discretionary form of entertainment. The state will have to negotiate either lenient covenants as they relate to gaming revenue or negotiate covenants that focus more on reserve requirements and debt service account levels, if it were to consider issuing non-taxable bonds.

7. Conclusion

Issuing debt backed by gaming revenue can accelerate a large portion of future gaming tax revenues, enabling the state to fund large public benefit construction projects such as schools, hospitals and infrastructure, or to mitigate underwriting risks associated with a natural disaster or, simply, to plug a budget hole. The state also could assure allocation of funds for a specific purpose by "locking in" the obligation via a debt service commitment. The public may read this positively, as the state pursuing an opportunity to deal with a compelling and timely new funding requirement.

Aside from lottery-backed financing, gaming revenue financing deals are inherently complicated from a political and public perception point of view. As exhibited in the case of

[120] Kimberly Lyons, "Moody's assign Aa2 rating to $184 million Oregon Department of Administrative Services Oregon state lottery revenue bonds series 2011" Moody's Investors Service, March 9, 2011; https://www.moodys.com/research/MOODYS-ASSIGNS-Aa2-RATING-TO-184-MILLION-OREGON-DEPARTMENT-OF-New-Issue--NIR_16852433.

[121] Chris Morgan "Summary: Oregon, Oregon Department of Administrative Services; Miscellaneous Tax," Standard & Poor's, March 11, 2011.

[122] Josellyn Yousef, "Moody's confirms Baa2 rating on Casino Reinvestment Development Authority's (NJ) $236 million Parking Fee and Atlantic City Fund Revenue Bonds outstanding, Series 2005A and 2005B," Moody's Investor Service, March 22, 2013; https://www.moodys.com/research/Moody's-confirms-Baa2-rating-on-Casino-Reinvestment-Development-Authoritys-NJ--PR_269436.

[122] August 9, 2013, interview with Josellyn Yousef, Lead Analyst, Public Finance Group, Moody's Investors Service.

Davenport, IA, interest rates on debt backed by gaming revenue may be significantly higher than they would be for general-obligation bonds and therefore could be interpreted that the issuer is financially distressed or, simply, employing misguided strategy.

A long-term consideration is the sensitivity of gaming-related revenues to local economic swings and increased competitive pressures. If the state treats gaming revenue taxes as an annual income stream that is earmarked for specific budgetary items, as it has been traditionally, lower revenue from gaming may be made up elsewhere, or the state/municipality can make adjustments to its budget to deal with income shortfalls. In a case where the state issues bonds backed by gaming revenue, there can be a significant funding issue if gaming revenue does not meet projections.

Such shortfalls may come from the long-term impacts of economic cycles and nearby competition, but it also can come from sudden catastrophes such as hurricane damage. Casino closures and disruptions have been well-documented in New Jersey, due to storms such as Superstorm Sandy,[123] and for riverboats along the Mississippi River due to flooding in 2011.[124]

The absence of many comparable transactions may illustrate the risks of pursuing gaming-backed Revenue Bonds. With the potential for higher cost, potential instability of the revenue source, risk of adverse public reaction, and foregoing valuable future revenue streams, the strategy of leveraging these revenue streams needs to be approached with caution.

[123]Donald Wittkowski, "Casino vendors suffer severe negative impact from casino closures during Hurricane Sandy," *Press of Atlantic City*, November 5, 2012; http://www.pressofatlanticcity.com/news/press/casinos_tourism/casino-vendors-suffer-severe-negative-impact-from-casino-closures-during/article_cb84ee64-26cf-11e2-9d05-001a4bcf887a.html.

[124] Isle of Capri 2012 annual report.

III. Estimated Total Spending and Net Economic Impact for Gaming

In this section, we estimate the total spending and net[125] economic impact for gaming, as well as the change in demand associated with each of several sources including:

- The current visitors who would have come to Florida in the absence of expanded gaming activities, but would choose to spend more during their visit, or extend the length of their visit, if additional casino gaming were available;
- Floridians who now gamble out of state or in Native American casinos who would instead opt to gamble in Florida, if additional local gaming activities were available;
- Floridians who now do not gamble but would participate if additional gaming activities were easily available.
- Visitors who plan a visit to Florida rather than an alternative destination due to the availability of gaming here.
- Visitors who would choose not to visit Florida due to the presence of gaming activities

The Eric Friedheim Tourism Institute at the University of Florida conducted a study on behalf of Spectrum Gaming Group and the Florida Legislature to explore consumer attitudes, perceptions, and intentions toward the possible expansion of gambling in Florida and to gauge the potential impact that expanded gambling could have on the state and its tourism industry. The insights gleaned from this research were intended to enlighten the discussion on the gambling initiatives and the related economic impact study. In this study, respondents were asked to provide their opinion on the following: (1) preferences for gambling in general and, specifically, expanded gambling in Florida; (2) the likelihood and type of participation in gambling activities in Florida; (3) preferred gambling regulations; (4) travel intentions toward Florida and specific Florida destinations given the presence or absence of expanded gambling venues; and (5) demography and gambling addiction characteristics of the sample given the presence or absence of expanded gaming opportunities in Florida.

Respondents were 18 years[126] and older and consisted of (1) Adults residing in Florida (n=1223); and (2) adults residing in Non-Florida States (n=1213). The data for this study were

[125] The net analysis recognizes any reduced spending at other Florida businesses because visitor and resident spending has now flowed to gaming activities.

[126] The minimum age to buy a lottery ticket in Florida and most other jurisdictions is 18. Some states allow those 18 and older to engage in casino-style gambling. The age parameter is also aligned with several other gambling-related studies.

collected during August 2013. A 20-minute consumer survey was conducted online. Spectrum and Regional Economic Models Inc. ("REMI") then interpreted the survey results to determine the economic impacts of spending – or prospective spending – on gambling in Florida.

A. Visitors Who Would Spend More or Stay Longer if More Gaming were Available

In order to understand how current visitors would change their spending behavior if there were additional casino gaming, our survey asked the following question: "*If additional casino gaming were available, would you choose to stay in Florida for a longer period of time?"* Approximately 15 percent of visitors indicated they would extend their stay if gambling was expanded in Florida. Some 28.2 percent of those who would extend their stay said they would stay two more days, while almost 19.7 percent said they would stay an extra week.

Figure 92: Survey results – extending length of stay due to gambling expansion

If gambling was expanded in the state of Florida, would you choose to extend your length of stay? (Non-residents, N=496)		
Yes, I would extend my stay: 14.9% (N=74)		
How many days would you extend your stay?		
Non-residents (N=71)		
Length	**Number**	**Percentage**
2 days	20	28.2
7 days	14	19.7
3 days	10	14.1
1 day	7	9.9
14 days	4	5.6
60 days	4	5.6
5 days	2	2.8
10 days	2	2.8
28 days	2	2.8
30 days	2	2.8
4 days	1	1.4
180 days	1	1.4
270 days	1	1.4
365 days	1	1.4

Source: Spectrum Gaming Group, University of Florida

The input to the economic impact simulation represents new GGR gained from these respondents. Over the course of the simulation, the average employment is 40,734 jobs and Gross State Product is $5.18 billion.[127] Total state revenues average $173.9 million.[128]

Figure 93: Economic impacts of visitors extending stay due to expended gaming, Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	44,435	43,306	42,175	41,217	40,431	39,828
Gross State Product	$4,653	$4,745	$4,835	$4,940	$5,058	$5,191
Gaming Taxes	$17.37	$17.56	$17.62	$17.58	$17.60	$17.74
Sales/Use Tax	$56.40	$60.41	$63.37	$65.73	$68.25	$70.94
Lottery	$5.76	$5.14	$4.59	$4.10	$3.73	$3.45
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
All other Revenues	$66.33	$72.26	$75.81	$78.85	$81.40	$83.61
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	39,393	39,077	38,815	38,661	40,734	
Gross State Product	$5,342	$5,506	$5,672	$5,849	$5,179	
Gaming Taxes	$17.95	$18.20	$18.43	$18.64	$17.87	
Sales/Use Tax	$74.01	$77.45	$81.06	$84.78	$70.24	
Lottery	$3.28	$3.18	$3.12	$3.09	$3.94	
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	
All other Revenues	$86.03	$88.77	$91.35	$93.76	$81.82	

Source: Spectrum Gaming Group, University of Florida, Regional Economic Models Inc. $ in nominal millions.

B. How Floridians Would Change In-State Spending if Gambling were Expanded/Reduced

In order to understand how Floridians might change their behavior to stay in the state if there was expanded opportunities, our study asked the following question: "*If gambling were expanded in the State would you be more likely to gamble in the State rather than take a trip out of the State?"* Almost half of Florida residents indicated they would more likely gamble in the state if gambling was expanded in Florida. Some 28.6 percent said they would gamble outside the state if current levels of gambling were reduced.

[127] Employment is the count of jobs relative to the base case scenario and is not cumulative. Gross state product is the net new economic activity generated in the state.

[128] The average of total state revenues used in this chapter represent annual average revenues to the State, including gaming taxes and tribal Compact revenues.

Figure 94: Survey results – Floridians' spending on gambling if gambling were expanded/reduced in state

If gambling were expanded in the state, would you be more likely to gambling in the state rather than take a trip out of the state?		
	(N=582)	Mean spending for this group
Florida residents who responded "Yes"	47.6%	$805.08
If gambling were reduced in the state, would you be more likely to gamble out of the state rather in the state?		
	(N=350)	Mean spending for this group
Florida residents who responded "Yes"	28.6%	$1,161.19

Source: Spectrum Gaming Group, University of Florida

The input to the economic impact simulation represents new GGR and other tourism spending gained from these respondents. Over the course of the simulation, the average employment is 12,337 jobs and Gross State Product is $1.38 billion. Total state revenues average $49.9 million.

Figure 95: Economic impacts of Floridians' spending on gambling if in-state options expanded/reduced, Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	13,539	13,183	12,820	12,510	12,260	12,064
Gross State Product	$1,257	$1,276	$1,296	$1,320	$1,348	$1,383
Gaming Taxes	$4.21	$4.23	$4.22	$4.20	$4.19	$4.21
Sales/Use Tax	$16.85	$18.06	$18.93	$19.63	$20.36	$21.15
Lottery	$1.68	$1.49	$1.32	$1.17	$1.05	$0.96
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
All other Revenues	$19.03	$20.78	$21.85	$22.77	$23.51	$24.16
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	11,911	11,787	11,685	11,612	12,337	
Gross State Product	$1,419	$1,460	$1,501	$1,545	$1,380	
Gaming Taxes	$4.25	$4.29	$4.33	$4.37	$4.25	
Sales/Use Tax	$22.04	$23.03	$24.07	$25.13	$20.92	
Lottery	$0.91	$0.87	$0.85	$0.84	$1.11	
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	
All other Revenues	$24.85	$25.61	$26.31	$26.96	$23.58	

Source: Spectrum Gaming Group, University of Florida, Regional Economic Models Inc. $ in nominal millions.

C. Floridians Non-Gamblers Who Would Gamble if More Gambling Activities were Available

First, our study asked the following question: "*Have you ever gambled in Florida?"* One-third (N=408) of Florida residents indicated they had not gambled in Florida. In addition, slightly more than half (N=634, 51.8 percent) said they had not gambled in Florida in the past 12 months.

Of those who had not gambled in Florida, half said they were likely to gamble in Florida in the future.

Figure 96: Survey results – Floridian non-gamblers likely to gamble in Florida in the future

	%	Mean spending for this group
Not at all likely	20.0	$14.54
2	12.2	$44.44
3	12.8	$81.66
4	5.0	$90.15
Extremely likely	1.9	$118.04
% within how likely are you to gamble in FL in future	51.8	$49.22

Source: Spectrum Gaming Group, University of Florida

The input to the economic impact simulation represents new GGR gained from these respondents and the reallocation of their spending away from other things. Over the course of the simulation, the average employment is 293 jobs and Gross State Product is $60 million. Total state revenues average $840 thousand.

Figure 97: Economic impacts of Floridian non-gamblers being likely to gamble in Florida in future, Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	296	294	291	288	289	286
Gross State Product	$52	$53	$55	$56	$58	$61
Gaming Taxes	$0.44	$0.44	$0.44	$0.44	$0.44	$0.44
Sales/Use Tax	$0.32	$0.35	$0.37	$0.39	$0.41	$0.43
Lottery	($0.50)	($0.49)	($0.48)	($0.47)	($0.47)	($0.46)
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
All other Revenues	$0.30	$0.35	$0.37	$0.40	$0.42	$0.44

At Default Budget	Year 7	Year 8	Year 9	Year 10	Average
Employment	289	290	299	308	293
Gross State Product	$62	$64	$67	$69	$60
Gaming Taxes	$0.45	$0.45	$0.46	$0.46	$0.45
Sales/Use Tax	$0.46	$0.48	$0.52	$0.57	$0.43
Lottery	($0.46)	($0.46)	($0.46)	($0.45)	($0.47)
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00
All other Revenues	$0.47	$0.50	$0.53	$0.56	$0.43

Source: Spectrum Gaming Group, University of Florida, Regional Economic Models Inc. $ in nominal millions.

D. Visitors Who Plan Florida Visit vs. Alternative Destination due to Availability of Gaming

Our study asked visitors (non-Florida residents) the following question: "*If Florida expanded gambling opportunities would you come to Florida more often?"* Twelve percent (N=60) of non-Florida residents indicated they would be more likely to come to Florida more often if gambling opportunities were expanded. The input to the economic impact simulation represents new tourism spending of all kinds from these respondents.

Figure 98: Survey results – visitors who would visit more often if Florida expanded gaming

If Florida expanded gambling opportunities would you come to Florida more often?		
	(N=496)	Mean spending for this group
Non-Florida residents who responded "yes"	12.1% (N=60)	$3,205

Source: Spectrum Gaming Group, University of Florida

Over the course of the simulation, the average employment is 125,989 jobs and Gross State Product is $10.6 billion. Total state revenues average $451 million.

Figure 99: Economic impacts of visitors visiting more often if Florida expanded gaming, Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	138,595	135,163	131,537	128,236	125,546	123,396
Gross State Product	$9,712	$9,869	$10,004	$10,171	$10,369	$10,614
Gaming Taxes	$14.08	$14.05	$13.91	$13.69	$13.52	$13.42
Sales/Use Tax	$163.55	$176.21	$185.29	$192.34	$199.63	$207.40
Lottery	$15.37	$13.40	$11.60	$9.97	$8.76	$7.83
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
All other Revenues	$176.02	$194.16	$205.89	$216.06	$224.00	$230.82
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	121,537	119,915	118,507	117,455	125,989	
Gross State Product	$10,882	$11,182	$11,501	$11,853	$10,616	
Gaming Taxes	$13.40	$13.40	$13.41	$13.39	$13.63	
Sales/Use Tax	$215.94	$225.24	$234.93	$244.87	$204.54	
Lottery	$7.21	$6.78	$6.49	$6.28	$9.37	
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	
All other Revenues	$237.73	$244.76	$251.26	$257.27	$223.80	

Source: Spectrum Gaming Group, University of Florida, Regional Economic Models Inc. $ in nominal millions.

E. Visitors Who Would Choose Not to Visit Florida Due to Expanded Gambling

Our study asked visitors (non-Florida residents) the following question: "I*f Florida expanded gambling opportunities, would you come to Florida less often?"* Less than 4 percent

(N=19) of non-Florida residents indicated they would come to Florida less often if gambling opportunities were expanded.

Figure 100: Visitors who would choose not to visit Florida due to expanded gambling

If Florida expanded gambling opportunities would you come to Florida more often?		
	(N=496)	Mean spending for this group
Non-Florida residents who responded "yes"	3.8 % (n=19)	$598.95

Source: Spectrum Gaming Group, University of Florida

The input to the economic impact simulation represents tourism spending lost from these respondents. Over the course of the simulation, the average employment is -7,405 jobs and Gross State Product is -$623 million. Total state revenues average -$26.5 million.

Figure 101: Economic impacts of visitors choosing not to visit Florida due to expanded gaming, Default Budget

At Default Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	-8,140	-7,942	-7,729	-7,537	-7,378	-7,253
Gross State Product	($570)	($579)	($587)	($597)	($609)	($623)
Gaming Taxes	($0.83)	($0.82)	($0.82)	($0.80)	($0.79)	($0.79)
Sales/Use Tax	($9.59)	($10.34)	($10.88)	($11.29)	($11.72)	($12.18)
Lottery	($0.90)	($0.79)	($0.68)	($0.59)	($0.52)	($0.46)
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
All other Revenues	($10.35)	($11.41)	($12.10)	($12.69)	($13.15)	($13.55)
At Default Budget	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Average**	
Employment	-7,146	-7,052	-6,967	-6,904	-7,405	
Gross State Product	($639)	($657)	($675)	($696)	($623)	
Gaming Taxes	($0.79)	($0.79)	($0.79)	($0.79)	($0.80)	
Sales/Use Tax	($12.68)	($13.24)	($13.80)	($14.38)	($12.01)	
Lottery	($0.43)	($0.41)	($0.39)	($0.38)	($0.55)	
Compact Revenues	$0.00	$0.00	$0.00	$0.00	$0.00	
All other Revenues	($13.95)	($14.36)	($14.74)	($15.09)	($13.14)	

Source: Spectrum Gaming Group, University of Florida, Regional Economic Models Inc. $ in nominal millions.

IV. Assessment of Likely Social Costs of Expanded Gaming

In this section, we assess the likely social costs of expanded gaming activities, including problem and pathological gaming-related behaviors and changes in crime rates. The assessment shall compare and contrast credible existing studies of social costs of gaming and provide social cost scenarios to match the preceding economic and fiscal analyses.

The dramatic expansion of gambling during the 20th Century raised a variety of concerns about its impact on the public health and welfare.[129] These fears stimulated a new era of gambling-related research[130] that holds the potential to inform prevention and treatment efforts as well as shape public policy toward gambling and gambling expansion. As it developed, the scientific literature bifurcated into two primary groups: (1) studies of gambling, and (2) studies of gambling-related problems. This body of work has helped to shape our understanding about who gambles, where and how they gamble, and which gamblers are at the greatest risk for developing gambling-related disorders. As Florida considers possible gambling expansion, a review of this literature will be informative for decision-making.

The scientific literature shows that a variety of interactive factors can influence the development and maintenance of gambling-related disorders. From a public health perspective, we can classify these factors into three primary groups: (1) host (e.g., gambler); (2) agent (e.g., game and game characteristics); and (3) environment (e.g., social setting within which people gamble – including cultural and community influences.[131] To date, the majority of research has focused on the host, or gambler, and the games that they play. However, Dr. Howard Shaffer, Director of the Division on Addictions at The Cambridge Health Alliance, a Harvard Medical School teaching affiliate; and Dr. David Korn, Clinical Professor of Pathology at Massachusetts General Hospital,[132] recognized the importance of the social setting when they argued for a public health approach to gambling. Gambling expansion appears to influence the environment primarily; however, the changes to the environment, in turn, affect both the host and the agent.[133] As we

[129] David A. Korn, "Expansion of Gambling in Canada: Implications for Health and Social Policy," *Canadian Medical Association Journal* 163, no. 1 (2000); David A. Korn and H.A. Skinner, "Gambling Expansion in Canada: An Emerging Public Health Issue," *CPHA Health Digest*, Autumn 2000; Howard J. Shaffer and David A. Korn, "Gambling and Related Mental Disorders: A Public Health Analysis," in *Annual Review of Public Health*, ed. Jonathan E. Fielding, Ross C. Brownson and Barbara Starfield (Palo Alto: Annual Reviews, Inc., 2002).

[130] Gabriel Eber, B. and Howard J. Shaffer, "Trends in Bio-Behavioral Gambling Studies Research: Quantifying Citations," *Journal of Gambling Studies* 16, no. 4 (2000); Howard J. Shaffer, M.V. Stanton, and S.E. Nelson, "Trends in Gambling Studies Research: Quantifying, Categorizing, and Describing Citations," ibid.22(2006).

[131] Shaffer and Korn, "Gambling and Related Mental Disorders: A Public Health Analysis."

[132] Ibid.

[133] David Kipnis, "Ghosts, Taxonomies, and Social Psychology," *American Psychologist* 52, no. 3 (1997); Norman E. Zinberg, *Drug, Set, and Setting: The Basis for Controlled Intoxicant Use* (New Haven: Yale University Press, 1984); Norman E. Zinberg and K.M. Fraser, "The Role of the Social Setting in the Prevention and Treatment

discuss in more detail in later sections, hosts, in this instance, gamblers, have different propensities to adapt to the presence of gambling and its various presentations in their environment. Consequently, gamblers who have experience with mature gambling environments, that is, settings with considerable gambling history experience, are likely to be less responsive to new or expanded gambling circumstances. Alternatively, new or naïve gamblers, hold the potential to be most influenced by shifts in the gambling environment.

At the population level, adaptation to gambling expansion is evident when we consider the epidemiology of gambling disorder[134] in new or mature gambling settings. For example, during the 1970s, the prevalence of gambling disorder in the United States was estimated to be about 0.7 percent.[135] Currently, despite the extraordinary growth of gambling and electronic gambling machines and an apparent increase in the prevalence of gambling-related problems during the 1990s,[136] the lifetime prevalence of gambling disorder in the United States is estimated to be 0.4 percent[137] – surprisingly, about the same. Similarly, the British national gambling surveys reveal that their rate of gambling disorder has slightly decreased – or remained the nearly same – despite expanded gambling and increased electronic gaming machines.[138] This suggests that Western Europe and British populations likely have matured in their relationship with gambling, and exposure changes related to expanded gambling within these jurisdictions did not have lasting impact at the national level.[139] Other jurisdictions or sub-jurisdictions that have different saturation levels might have experienced different impact under similar expansion changes.

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of Alcoholism," in *The Diagnosis & Treatment of Alcoholism*, ed. Jack Mendelson and Nancy Mello (New York: McGraw-Hill Book Company, 1979); Norman E. Zinberg and Howard J. Shaffer, "The Social Psychology of Intoxicant Use: The Interaction of Personality and Social Setting," in *The Addictions: Multidisciplinary Perspectives and Treatments*, ed. H.B. Milkman and Howard J. Shaffer (Lexington, MA: Lexington Books, 1985).

[134] Gambling disorder is the new terminology describing the mental disorder associated with excessive and repetitive gambling behavior. This term replaces the previous disorder of Pathological Gambling. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders--Text Revision*, Fourth ed. (Washington, D.C.: American Psychiatric Association, 2000); American Psychiatric Association. and American Psychiatric Association. DSM-5 Task Force, *Diagnostic and Statistical Manual of Mental Disorders: DSM-5*, 5th ed. (Arlington, VA: American Psychiatric Association, 2013).

[135] M. Kallick et al., "A Survey of American Gambling Attitudes and Behavior," (Ann Arbor, MI: University of Michigan Press, 1979).

[136] Howard J. Shaffer, M.N. Hall, and J. Vander Bilt, "Estimating the Prevalence of Disordered Gambling Behavior in the United States and Canada: A Research Synthesis," *American Journal of Public Health* 89(1999).

[137] Nancy M. Petry, F.S. Stinson, and B.F. Grant, "Comorbidity of DSM-IV Pathological Gambling and Other Psychiatric Disorders: Results from the National Epidemiologic Survey on Alcohol and Related Conditions," *Journal of Clinical Psychiatry* 66, no. 5 (2005).

[138] H. Wardle et al., "British Gambling Prevalence Survey 2007," *National Centre for Social Research* (2007); Heather Wardle et al., "British Gambling Prevalence Survey 2010," ibid.(2011).

[139] J.W. Welte et al., "Gambling Participation and Pathology in the United States--a Sociodemographic Analysis Using Classification Trees," *Addictive Behaviors* 29, no. 5 (2004); Howard J. Shaffer and Ryan Martin,

Unfortunately, most research focusing on the development and maintenance of gambling-related problems derives from cross-sectional investigative designs. This means that different groups of people were evaluated at different moments in time, leaving scientists unable to determine the specific influences that might have shaped or maintained their gambling patterns over time. Prospective longitudinal research designs – following the same people over time – are necessary to determine with more precision the impact of gambling and gambling expansion on the community and its members.

The few prospective studies completed to date reveal that gambling is a relatively unstable disorder[140] that tends to ebb and flow during both the lifetime as well as within shorter timeframes. This finding is contrary to the often-expressed conventional wisdom that gambling is only a progressive disorder.[141] Prospective studies show that both casino and Internet gamblers adapt – tending to reduce their involvement with gambling over time;[142] cross-sectional research has shown similarly that opening casinos is not always associated with increases in gambling disorder.[143]

The purpose of this chapter is to examine and discuss the scientific literature that focuses on the impact of gambling expansion and increased access that can result from such expansion. This chapter first will provide a general discussion of the published literature related to expanded gambling, specifically addressing topics such as temporal effects, geographic effects, objective measurement of exposure, adaptation to availability changes, implications for special populations,

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"Disordered Gambling: Etiology, Trajectory, and Clinical Considerations," *Annual Review of Clinical Psychology* 7, no. April (2011).

[140] Christian Jacques and Robert Ladouceur, "A Prospective Study of the Impact of Opening a Casino on Gambling Behaviours: 2- and 4-Year Follow-Ups," *Canadian Journal of Psychiatry* 51, no. 12 (2006); Richard A. LaBrie et al., "Inside the Virtual Casino: A Prospective Longitudinal Study of Actual Internet Casino Gambling," *European Journal of Public Health* 18, no. 4 (2008); Richard A. LaBrie et al., "Assessing the Playing Field: A Prospective Longitudinal Study of Internet Sports Gambling Behavior," *Journal of Gambling Studies* 23, no. 3 (2007); Debi A. LaPlante et al., "Sitting at the Virtual Poker Table: A Prospective Epidemiological Study of Actual Internet Poker Gambling Behavior," *Computers in Human Behavior* 25, no. 3 (2009); Wendy S. Slutske et al., "Personality and Problem Gambling: A Prospective Study of a Birth Cohort of Young Adults," *Archives of General Psychiatry* 62, no. 7 (2005).

[141] Debi A. LaPlante et al., "Stability and Progression of Disordered Gambling: Lessons from Longitudinal Studies," *Canadian Journal of Psychiatry* 53, no. 1 (2008).

[142] e.g., Christian Jacques and Robert Ladouceur, "A Prospective Study of the Impact of Opening a Casino on Gambling Behaviours: 2- and 4-Year Follow-Ups," ibid.51, no. 12 (2006); Debi A. LaPlante and Howard J. Shaffer, "Understanding the Influence of Gambling Opportunities: Expanding Exposure Models to Include Adaptation," *The American Journal of Orthopsychiatry* 77, no. 4 (2007); Ziming Xuan and Howard J. Shaffer, "How Do Gamblers End Gambling: Longitudinal Analysis of Internet Gambling Behaviors Prior to Account Closure Due to Gambling Related Problems," *Journal of Gambling Studies* 25, no. 2 (2009).

[143] G. Bondolfi et al., "Prevalence of Pathological Gambling in Switzerland after the Opening of Casinos and the Introduction of New Preventive Legislation," *Acta psychiatrica Scandinavica* 117(2008); Donald Black, "Prevalence of Problem Gambling in Iowa: Revisiting Shaffer's Adaptation Hypothesis.," 24, no. 4 (2012).

and crime. We then will present a quantitative analysis of systematically selected gambling expansion literature, weighing both amount of expansion and methodological strength. We will close this chapter with a broad discussion of social costs associated with gambling expansion, including the pros and cons of numeric estimation, as well as providing a range of potential costs, based on the available literature.

A. Understanding Gambling Expansion Impact across Time, Space, and People[144]

As Florida's residents likely will understand, few discussions of gambling generate as much emotional debate as the effect of legalized gambling expansion on public health. Opponents of the expansion of gambling argue that increased opportunities for gambling create a corresponding increase in gambling-related problems, including gambling disorder. Proponents of the expansion of gambling argue that increased opportunities for gambling create jobs and revenue and stimulate the economy. Fortunately, there is evidence available to inform the potential impact of gambling expansion on the public health.

Closely related to gambling expansion is gambling *exposure.* Whereas gambling expansion specifically refers to increases in gambling opportunities, gambling exposure refers to contact with gambling opportunities. A brief discussion of the literature pertaining to gambling exposure is informative for understanding potential gambling expansion impacts in Florida and other jurisdictions.

Research suggests that there is a relationship between exposure to gambling opportunities and gambling-related problems.[145] The relationship is apparent in many different ways. For instance, studies suggest that gaming employees might experience occupational exposure effects. That is, elevated exposure due to contact at work elevates risk for problems. For many years, people have observed that one's occupation, often places individuals at risk for specific hazards. During the 19th century, John Snow argued that if a trade truly causes adverse health consequences, then it should "be extremely so to the workmen engaged in those trades."[146]

[144] This review draws upon the ideas and concepts reviewed in Shaffer, H.J., & Martin, R.J. (2011). Disordered gambling: Etiology, trajectory and clinical considerations. *Annual Review of Clinical Psychology*, 7, 483-510. doi: 10.1146/annurev-clinpsy-040510-143928; LaPlante, D.A. & Shaffer, H.J. (2007). Understanding the influence of gambling opportunities: Expanding exposure models to include adaptation. *American Journal of Orthopsychiatry*, 77(4), 616-623; and, Shaffer, H.J., LaBrie, R.A., & LaPlante, D.A. (2004). Laying the foundation for quantifying regional exposure to social phenomena: Considering the case of legalized gambling as a public health toxin. *Psychology of Addictive Behaviors*, 18(1), 40–48.

[145] I.e., exposure effects; for a full review see Debi A. LaPlante and Howard J. Shaffer, "Understanding the Influence of Gambling Opportunities: Expanding Exposure Models to Include Adaptation," *American Journal of Orthopsychiatry* 77, no. 4 (2007).

[146] David E. Lilienfeld, "John Snow: The First Hired Gun?," *American Journal of Epidemiology* 152, no. 1 (2000), p5.

Consistently, in a study of more than 3,000 casino employees from four geographic sites, we found that, relative to the general population, casino employees had a higher rate of severe gambling-related problems.[147] A study of a second sample of casino employees confirmed these findings and, additionally, found higher rates of subclinical gambling-related problems.[148]

Research focusing on the geographic exposure to gambling opportunities (e.g., living within a certain distance from gambling opportunities) is fairly consistent. Geographic exposure studies suggest that, when gambling opportunities are nearby, gambling-related problems also are likely to be evident. For example, in the only nationally representative study of college student gambling, we found that that students who attended schools that had two or more legal gambling venues in the same state were more likely to gamble.[149] Legalized gambling also is associated with higher rates of help-seeking. For example, legalized gambling is related to the availability of Gambler's Anonymous chapters,[150] and research from Missouri indicates that rates of self-exclusion from casinos are associated with the location of casinos:[151] areas in Missouri that have more casinos have higher rates of self-exclusion among residents. Hence, many studies have demonstrated the proximity to gambling opportunities elevates risk for gambling and gambling problems.

However, there are important methodological concerns associated with these and similar geographic exposure studies that limit their value and potentially their validity. To illustrate, one of the most common ways to study geographic exposure has been to examine variability among the rates of gambling and gambling-related problems with respect to *predetermined* distances from gambling venues. For example, the National Gambling Impact Study Commission found that a casino within 50 miles (vs. 50 to 250 miles) of a person's home is associated with nearly doubled levels of gambling-related problems and gambling disorder.[152] Similarly, a study of Iowa's Gambling Treatment Program helpline callers found that counties within 50 miles of at least one

[147] Howard J. Shaffer, J. Vander Bilt, and Matthew N. Hall, "Gambling, Drinking, Smoking and Other Health Risk Activities among Casino Employees," *American Journal of Industrial Medicine* 36, no. 3 (1999).

[148] Howard J. Shaffer and M.N. Hall, "The Natural History of Gambling and Drinking Problems Among Casino Employees," *Journal of Social Psychology* 142, no. 4 (2002).

[149] Richard A. LaBrie et al., "Correlates of College Student Gambling in the United States," *Journal of American College Health* 52, no. 2 (2003).

[150] David Lester, "Access to Gambling Opportunities and Compulsive Gambling," *Substance Use & Misuse* 29, no. 12 (1994).

[151] Richard A. LaBrie et al., "Missouri Casino Self-Excluders: Distributions Across Time and Space," *Journal of Gambling Studies* 23, no. 2 (2007).

[152] Dean Gerstein et al., "Gambling Impact and Behavior Study: Report to the National Gambling Impact Study Commission," (Chicago: National Opinion Research Center, 1999).

gambling venue received the highest number of gambling crisis calls.[153] Likewise, Welte, Wieczorek, Barnes, Tidwell and Hoffman[154] found that, among a range of distances, a 10-mile limit provided the best predictive power for the prototypical exposure effect. That is, more than individuals who lived at greater distances, individuals who reported a casino within 10 miles of their home were more likely to have gambling-related problems. Importantly, these researchers also noted, however, that their models accounted for only a small amount of the total variance. Therefore, a number of unmeasured factors, in addition to geographic proximity, play a role in the development of gambling-related problems.

To start, this body of research fails to include investigative designs that actually can detect causal relationships between proximity and problems. Rather, geographic exposure studies, at most, can illustrate that there is an association between proximity and problems. Geographic studies of exposure also fail to consider infrastructure variations. For example, what effect, if any, does accessibility to venues, number of employees and amount of advertising have on the proximity-problem relationship? Similarly, how do regional vulnerability characteristics change the nature of the relationship between proximity and rates of gambling-related problems? Regions that are more vulnerable might experience exposure differently than regions that are more robust, with respect to public health. Preliminary research confirms that such regional factors could be important. For example, in Missouri, regional vulnerability to risky behavior related to the development of gambling problems, even after controlling for gambling venue proximity.[155]

Finally, investigators tend arbitrarily to select the distances (e.g., 50 miles, 10 miles, 100 miles) that they evaluate. This methodological strategy means that any identified effects are specific to those arbitrarily selected distances. What is the size of a particular effect at 49 miles as opposed to 50 miles? Likewise, crude cutoffs, instead of continuous measures, preclude more fine-grained analyses and exclude regions in which virtually no variability in gambling venue exposure is possible (e.g., Nevada). Although geographic exposure studies do show consistency, exposure estimations that are more precise suggest that the relationship is not as straightforward as might be assumed.

[153] Howard J. Shaffer et al., "Evaluating the Iowa Department of Public Health Gambling Treatment Program: Four Years of Evidence," (Boston: Harvard Medical School, Division on Addictions, 2002).

[154] J.W. Welte et al., "The Relationship of Ecological and Geographic Factors to Gambling Behavior and Pathology," *Journal of Gambling Studies* 20, no. 4 (2004).

[155] Richard A. LaBrie et al., "Missouri Casino Self-Excluders: Distributions across Time and Space," ibid.23, no. 2 (2007).

1. Measuring Gambling Exposure

Shaffer, LaBrie, and LaPlante[156] argued that, by treating gambling as a social or environmental toxin, they could develop a flexible strategic model that would permit the quantitative measurement of regional exposure to gambling. They suggested that a strategic Regional Exposure Model ("REM") could quantify the gambling exposure that exists in a community, county, state or region. The REM yields a standardized multidimensional exposure gradient, the Regional Index of Gambling Exposure ("RIGE"). With a standardized measure, researchers can use the RIGE to test theoretical models empirically, as well as to examine the potential causes and consequences of exposure to social phenomena such as gambling.

The multiple sources that contribute to gambling exposure can be difficult to identify and measure. These sources of exposure likely include, but are not limited to, interpersonal (e.g., peer pressure), societal (e.g., advertising), civic (e.g., venues) and occupational factors (e.g., employment). Research focusing on exposure has shown that some of these factors influence behavior. The basic REM model incorporates three primary exposure components: dose, potency and duration. Components can be added or subtracted to this model. *Dose* is a measure of exposure quantity (e.g., the extent of exposure to a potentially toxic source: lead paint, pesticides, alcohol, casinos). *Potency* is a measure of source strength, amount or threshold (e.g., extent of lead in soil, paint, plumbing, proof of beverage alcohol, type of gambling and settings within which people gamble [charitable, lottery, racetracks, casinos, etc.]). *Duration* is a measure of exposure time (e.g., elapsed years of legal drinking or gambling).

The fundamental equation for determining the regional exposure gradient follows:

$$RE=a + b_1(f)D_1 + b_2(f)P_2 + b_3(f)T_3 +\ldots\ b_i(f)X_i + \text{error}$$

RE represents regional exposure, where "a" is constant, D is standardized dose, P is standardized potency (i.e., strength of exposure), T is standardized duration (i.e., elapsed exposure) and Xi represents additional standardized environmental public health factors. Error can result from a number of sources, such as regional contiguity. Weights (b) for each component are variable and include the possibility that the component should be transposed (f) because the relationship between increasing exposure and gambling problems might be nonlinear (e.g., quadratic or gradually increasing sine curve).

The RIGE model is important for those interested in identifying the complexities associated with geographic gambling exposure effects. Specifically, that increases in exposure are not necessarily matched proportionately by increases in exposure effects. This means that increasing exposure is not necessarily associated with ever-increasing behavior or problems. Confirming this,

[156] Howard J. Shaffer, Richard LaBrie and Debi LaPlante, "Laying the Foundation for Quantifying Regional Exposure to Social Phenomena: Considering the Case of Legalized Gambling as a Public Health Toxin," *Psychology of Addictive Behaviors* 18, no. 1 (2004).

using the RIGE strategy, researchers[157] demonstrated that, although Nevada is eight times more exposed to gambling compared to the next most-exposed gambling state, the rate of gambling disorder is not eight times higher in Nevada compared to New Jersey. This pattern suggests that factors other than exposure (e.g., adaptation) are at work influencing the development of gambling and gambling disorders. Considering the role of adaptation as a counterbalance to exposure is a new frontier for gambling-related research and theory.

2. Considering Adaptation to Gambling

The impacts of expanded gambling on populations are likely to be diverse; however, the scope and duration of gambling impact for specific areas is difficult to estimate. This difficulty exists because of limitations on the available scientific literature in this area. Prospective longitudinal studies (i.e., studies that follow groups of individuals over long periods of time), ultimately, are important to determine the impact of expanded gambling on the general population. Unfortunately, few longitudinal studies focusing on the effects of gambling expansion are available. Moreover, the outcomes of available studies are somewhat mixed.

Grun and McKeigue[158] found in Great Britain, for example, an increase in subclinical levels, but not clinical levels of gambling-related problems following the implementation of a national lottery. Furthermore, the impact was not uniform within the affected area. In addition to studies like this one that yield mixed outcomes, available studies that examine gambling and gambling-related problems before and after gambling expansion tend to have many methodological limitations (e.g., poor follow-up rates and limited generalizability). Such designs preclude a final determination about whether gambling expansion (a) creates problems, (b) attracts people who already have problems, (c) develops in areas where people already have problems, or (d) is correlated with other factors, such as urban development and isolation, which might be the true source of problems.

With longitudinal studies, it is easier to discern patterns and changes over time that are not possible to observe in single time point or even pre-post studies. The few available multi-time point studies indicate that such repeated observations are essential to the development of an accurate description of gambling impact. As described previously, Shaffer, LaBrie and LaPlante raised the idea that the presence of gambling could be a social toxin and act similarly to other environmental toxins that affect individuals and communities.[159] They argued that certain social events, such as gambling and advertising could be the social equivalents of germs. Consistently,

[157] Ibid.

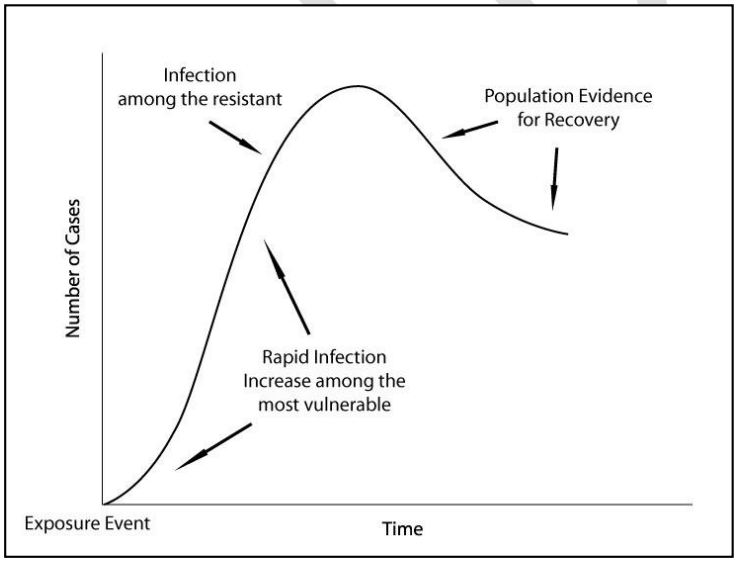
[158] "Prevalence of Excessive Gambling before and after Introduction of a National Lottery in the United Kingdom: Another Example of the Single Distribution Theory," *Addiction* 95, no. 6 (2000).

[159] "Laying the Foundation for Quantifying Regional Exposure to Social Phenomena: Considering the Case of Legalized Gambling as a Public Health Toxin."

McGuire's[160] social inoculation theory suggests that exposure to social phenomena, like exposure to toxins, can stimulate a shift in attitudes and behavior; in turn, these changes can influence many things, including health. Individuals' "social immunity," or resistance to the social phenomena that they have developed over time through exposure to the toxin, determines the strength of such shifts. It follows that small amounts of exposure can stimulate the development of resistance (i.e., inoculation), but large amounts of toxic exposure can overwhelm resistance and lead to adverse consequences. According to this theory, more exposure translates into a greater likelihood of infection for an increasingly larger segment of the population.

Exposure to gambling is essential to the development of gambling-related problems. However, as illustrated above, the links between gambling exposure, gambling expansion and gambling-related problems are not as straightforward as many people assume. One reason for such findings might be adaptation. Recall that rates of problems among long-term residents of Nevada are not eight times greater than the next most-exposed jurisdiction (New Jersey); this likely is because Nevada residents have adapted to the proximity of casinos and other gambling opportunities in a way that makes additional opportunities a less powerful influence on their behavior than might be otherwise. Although public health research informs us that adaptation is a primary component of the prototypical natural history of infection,[161] few gambling researchers have explored this possibility.

Figure 102: Prototypical epidemic curve



Source: LaPlante & Schaffer

[160] William J. McGuire, "Inducing Resistance to Persuasion," in *Advances in Experimental Social Psychology*, ed. Leonard Berkowitz (New York: Academic Press, 1964).

[161] Center for Disease Control and Prevention, "Constructing an Epidemic Curve," http://www.cdc.gov/descd/MiniModules/Epidemic_Curve/page09.htm; Leon Gordis, *Epidemiology*, 2nd ed. (Philadelphia: W.B. Saunders Company, 2000).

In brief, Figure 102 adapted from LaPlante & Shaffer,[162] illustrates the course of a prototypical population infection. It suggests that exposure to new toxins (e.g., viruses, lead paint) produces problems, like disease. As exposure to toxins occurs, the most vulnerable people in the population become infected. However, as the most vulnerable members of the population succumb to the toxin and remaining people become more resilient, the number of new cases reaches a peak. After this peak, people and society adapt, and the original problem tends to more closely approximate pre-exposure levels.

For gambling, this might mean exposure to new gambling opportunities (e.g., gambling expansion) can lead to more gambling and more gambling-related problems, especially among those who are most vulnerable. However, when populations already have accumulated some resiliency (e.g., Nevada's saturated market), the impact of gambling expansion (i.e., new exposure events) weakens. As with disease, gambling expansion effects vary by location, historical moment and population, among other things. Consequently, discussions about the impact of gambling and gambling expansion on population segments must consider the experience of the population segment with gambling, the vulnerability of the population segment to a range of gambling-related disorders, and the history of the population with respect to adaptation to gambling-related activities (e.g., wagering, advertising, etc.).

3. Pre- and Post-Gambling Expansion Examples

There is increasing evidence that the phenomenological processes associated with exposure to new gambling opportunities are similar to those associated with exposure to new toxins. For example, a 2002 Nevada study found that recent residents of Nevada had more current gambling-related problems than long-term residents did.[163] Similarly, Shaffer and colleagues[164] found that newer employees had more past year gambling-related problems than more experienced employees (i.e., employed for more than four years) did.

Similarly, a longitudinal study of self-exclusion from casinos in Missouri revealed that self-exclusion enrollment rates have changed over time in a way that is consistent with public health exposure and adaptation modeling.[165] Likewise, one longitudinal study conducted in Canada showed that gambling-related problems did not escalate linearly following the addition of a new

[162] LaPlante and Shaffer, "Understanding the Influence of Gambling Opportunities: Expanding Exposure Models to Include Adaptation."

[163] Rachel A. Volberg, "Gambling and Problem Gambling in Nevada: Report to the Nevada Department of Human Resources," (Northampton, MA: Gemini Research Ltd., 2002).

[164] "Gambling, Drinking, Smoking and Other Health Risk Activities among Casino Employees."

[165] Richard A. LaBrie et al., "Missouri Casino Self-Excluders: Distributions across Time and Space," *Journal of Gambling Studies* 23, no. 2 (2007).

casino in the region.[166] Rather, rates of problems increased in the short run but later returned to pre-casino levels. Finally, in some of our own work involving Internet gambling, we observed among more than 40,000 people that new subscribers to an Internet gambling service also followed a similar pattern marked by initial increases in activity and later evidence of adaptation.[167]

Taken altogether, these findings suggest that exposure effects are not as straightforward as many people assume. Instead, exposure effects vary depending on many different characteristics (e.g., people, places, period and more). Although early views of exposure might have suggested a simple linear association between gambling exposure and gambling problems (i.e., increased exposure increases problems commensurately), this other methodologically advanced work suggests that the effects of exposure vary across people, time and space. Most specifically, exposure effects seem to be of limited duration. In the following brief discussion, we highlight some of the most recently published peer-reviewed studies that have examined exposure and adaptation effects related to gambling expansion. In a later section of this chapter, we provide a systematic review and analysis of some of these and similar studies.

- *Iowa*. New research from Iowa[168] – recognizing that most exposure studies ignore temporal changes – tested Shaffer's adaptation hypothesis using a telephone survey of community members. There had been a presumption that the expansion of gambling in Iowa between 1989 and 1995 led to increases in a variety of problems related to gambling. However, as the adaptation hypothesis predicted, by comparing the 1989 and 1995 samples to a current sample, Black et al. revealed that despite continuing increases in the expansion of gambling opportunities (i.e., casinos) the newly observed low rates support the adaptation hypothesis and "… suggest that the prevalence of disordered gambling in Iowa has not increased and may have even decreased since 1995, despite increased gambling opportunities" (p. 281).
- *Missouri*. In a statewide study of gamblers, researchers examined the temporal and geographic distribution of gamblers who elected to self-exclude themselves from casino gambling from 1996 to 2004.[169] LaBrie et al. plotted the location of Missouri casinos across the state and identified epicenters of gambling-related problems. Using the RIGE, these researchers demonstrated the geographic gradient associated with gambling disorders. The temporal analysis was most interesting, however, because it showed that the annual number of self-exclusion enrollments increased initially after

[166] Jacques and Ladouceur, "A Prospective Study of the Impact of Opening a Casino on Gambling Behaviours: 2- and 4-Year Follow-Ups."

[167] Debi A. LaPlante et al., "Population Trends in Internet Sports Gambling," *Computers in Human Behavior* 24, no. 5 (2008).

[168] Black, "Prevalence of Problem Gambling in Iowa: Revisiting Shaffer's Adaptation Hypothesis."

[169] LaBrie et al., "Missouri Casino Self-Excluders: Distributions across Time and Space."

the opening of casinos and then leveled off during later years – as the adaptation hypothesis predicts.

- *Canada.* Canadian researchers prospectively examined the impact of new casino gambling on the community.[170] Their first study of gambling impact examined the introduction of new casino gambling activities and its impact on randomly selected nearby residents.[171] Using a comparison sample, and an experimental community (i.e., the community within which a new casino opened), the researchers compared the two groups of participants before and after the opening of the casino. The experimental group exposed to the new casino showed a significant increase in gambling on casino games, the maximum amount of money lost in one day of gambling, reluctance toward the opening of a local casino, and the number of participants who reported knowing a person who has developed a gambling problem during the last 12 months.

  Their second study, which represents the first prospective study with an experimental and comparison group, clarified these findings.[172] Despite finding that, at one year after the opening of the casino, an increase in playing casino games and in the maximum amount of money lost in one day's gambling, this trend was not maintained over time. As the adaptation hypothesis predicted, for the group exposed to a new casino, the rate of at-risk and probable pathological gamblers did not increase at the two- and four-year follow-ups. The residents' reluctance to open a local casino was generally stable over time following the casino's opening. As a result, the authors concluded that these findings raise different explanatory factors and provide support for the Regional Exposure Model as a useful measure of studying the expansion of gambling and the adaptation hypothesis.

- *Switzerland.* Using a community sample and telephone surveys, Bondolfi et al.[173] demonstrated that the rate of past-year problem and disordered gambling remained steady (i.e., 0.8 percent for problem and 0.5 percent for disordered) between 1998 and 2005 "despite the massive opening of casinos in Switzerland since 2002" (p. 238). As with Iowa, these researchers supported the adaptation hypothesis and suggested that

[170] Jacques and Ladouceur, "A Prospective Study of the Impact of Opening a Casino on Gambling Behaviours: 2- and 4-Year Follow-Ups; Christian Jacques, Robert Ladouceur and Francine Ferland, "Impact of Availability on Gambling: A Longitudinal Study," ibid.45, no. 9 (2000).

[171] "Impact of Availability on Gambling: A Longitudinal Study."

[172] Christian Jacques and Robert Ladouceur, "A Prospective Study of the Impact of Opening a Casino on Gambling Behaviours: 2- and 4-Year Follow-Ups," ibid.51, no. 12 (2006).

[173] Bondolfi et al., "Prevalence of Pathological Gambling in Switzerland after the Opening of Casinos and the Introduction of New Preventive Legislation."

various factors (e.g., social measures, legal obligations and social adaptation capacities) might account for the stabilization of prevalence estimates.

- *Australia and New Zealand.* Storer, Abbott and Stubbs conducted a research synthesis[174] of 34 epidemiologic studies of problem gambling conducted in Australia and New Zealand since 1991. They examined the greater availability of electronic gaming machines ("EGMs") and any associated increases in problem gambling prevalence and related harms. In addition, they examined whether individuals and populations adapt to exposure over time (i.e., whether prevalence rates plateau or decline), even in the face of increasing gambling availability. Although these authors consider these two competing hypotheses, this study effectively examines the adaptation hypothesis, which suggests both an increase in gambling-related problems as a novelty effect, followed by a plateau or reduction in these problems.[175] They observed statistically meaningful relationships for an increase in prevalence with increasing per capita density of EGMs, consistent with the exposure hypothesis. However, they also report that they failed to observe evidence that prevalence leveled off with increasing density of EGMs. They did observe a decrease in the prevalence of gambling disorder over time when they controlled for the availability EGMs. This finding is partially consistent with adaptation. The authors conclude that it is likely that both forces are at work simultaneously. However, adaptation always remains a function of timeframe, suggesting that the relationship between EGM, gambling disorders and a host of other community, player and game characteristics can influence the prevalence of gambling-related problems.

- *Sweden.* Abbott, Romild and Volberg[176] used data from the Swedish Longitudinal Gambling Study (Swelogs). This data reflects an eight-year research program, financed and conducted by the Swedish National Institute of Public Health. The major goal of the study is to identify risk and protective factors for problem gambling and develop methods and strategies to prevent problem gambling and other gambling-related harms. After comparing data from 1997-1998 to 2008-2009, the authors observed that – despite using a sample with "… higher numbers of younger people and those with higher risk for gambling problems …" and expanded gambling exposure – "…the proportion of the Swedish population that gambled in the past year reduced significantly." The researchers observed this finding both for the past year and the past

[174] J. Storer, M. Abbott, and J. Stubbs, "Access or Adaptation? A Meta-Analysis of Surveys of Problem Gambling Prevalence in Australia and New Zealand with Respect to Concentration of Electronic Gaming Machines," *International Gambling Studies* 9, no. 3 (2009).

[175] LaPlante and Shaffer, "Understanding the Influence of Gambling Opportunities: Expanding Exposure Models to Include Adaptation."

[176] Max W. Abbott, Ulla Romild and Rachel A. Volberg, "Gambling and Problem Gambling in Sweden: Changes between 1998 and 2009," *Journal of Gambling Studies* (2013).

30-day timeframes across a variety of gambling types, and across all demographic groups in the population (e.g., age groups, gender). "The finding in the present study, of significant reductions in gambling participation, is consistent with findings from research in a number of other jurisdictions including New Zealand and Australia. These results are consistent with the adaptation hypothesis, namely that despite increased availability and marketing, gambling participation (and problems) can decrease as novelty wears off and people become more aware of the harm and social costs associated with gambling."[177] Finally, although there was an increased rate of lifetime gambling disorder, the prevalence of past-12-month gambling disorder remained stable across the timeframe comparison.[178]

4. Population Segments

It is important to note that gambling expansion is likely to affect different groups of people in different ways. There is evidence that the risks associated with gambling disorder vary across population segments.[179] In this section, we briefly review research related to some of the most well-studied population segments that might experience gambling expansion differently from those in the general population.

a. Youth

Historically, research has shown that young people are at greater risk for developing gambling-related problems compared with their adult counterparts.[180] However, new research is casting this risk in a different light. In a rare longitudinal study of gambling-related behaviors, Winters et al. observed that the prevalence of adolescents with gambling disorders in Minnesota

[177] Ibid.

[178] Past year disorder rates are more meaningful than lifetime rates because these are more accurate and can vary up and down. When accurate, lifetime rates only increase across the lifespan.

[179] Howard J. Shaffer and Matthew N. Hall, "Updating and Refining Meta-Analytic Prevalence Estimates of Disordered Gambling Behaviour in the United States and Canada," *Canadian Journal of Public Health* 92, no. 3 (2001); Shaffer, Hall and Vander Bilt, "Estimating the Prevalence of Disordered Gambling Behavior in the United States and Canada: A Research Synthesis; J.W. Welte et al., "Gambling and Problem Gambling across the Lifespan," *Journal of Gambling Studies* 27, no. 1 (2011); J.W. Welte et al., "The Prevalence of Problem Gambling Among U.S. Adolescents and Young Adults: Results from a National Survey," ibid.(2008); J.W. Welte et al., "Gambling Participation in the U.S.--Results from a National Survey," ibid.18, no. 4 (2002); J.W. Welte et al., "Risk Factors for Pathological Gambling," *Addictive Behaviors* 29, no. 2 (2004).

[180] Shaffer, Hall and Vander Bilt, "Estimating the Prevalence of Disordered Gambling Behavior in the United States and Canada: A Research Synthesis; Shaffer and Hall, "Updating and Refining Meta-Analytic Prevalence Estimates of Disordered Gambling Behaviour in the United States and Canada; Nancy M. Petry, *Pathological Gambling: Etiology, Comorbidity, and Treatment*, 1st ed. (Washington, DC: American Psychological Association, 2005).

did not increase despite a shift away from informal games toward more legalized games.[181] Similarly, Wallisch observed that the rate of gambling remained steady and the prevalence of gambling disorders actually diminished among adolescents in Texas between 1992 and 1995.[182] Shaffer and Korn[183] noted that meta-analytic research showed that the rate of disordered gambling had increased during the last three decades of the 20th century, but only among adults from the general population. Consistent with the few local studies that had monitored young people's gambling behavior, the rate of disorder was not increasing among youth or patients with psychiatric or substance use disorders.[184]

As we noted earlier, as gambling expanded throughout the United States and more people started to gamble, the rate of gambling disorders among adults from the general population has remained steady[185] – despite their increased gambling activity. For adults, legalized gambling provided an increasingly acceptable opportunity to try a new activity; for young people, however, gambling remains illicit regardless of expansion. Because of their disconnect from public policy pressures, for psychiatric patients, prisoners or underage gamblers, the social sanctions and proscriptions are less influential than for adults from the general population. As gambling expands, therefore, adults from the general populace are the population segment likely to be most responsive to these changes. Consequently, we might expect that the healthy adult segment of the population is going to reflect the most visible effects from expanded gambling opportunities.

b. Elderly

Although stakeholders have tended to consider younger people as at higher risk for gambling-related problems compared with their adult counterparts, there is increasing attention toward older adults and their increased risks or benefits from gambling. As gambling expanded and older adults sought more varied recreational activities, gambling junkets became more common choices for mixing travel and gambling. Furthermore, the industry and those associated with the industry (e.g., travel agents) increasingly promoted these junkets. Investigators reported that older adults gambled to relax, pass time, get away for the day, avoid boredom and take

[181] Ken C. Winters, Randy D. Stinchfield and Leigh G. Kim, "Monitoring Adolescent Gambling in Minnesota," *Journal of Gambling Studies* 11, no. 2 (1995).

[182] L.S. Wallisch, "Gambling in Texas: 1992 Texas Survey of Adolescent Gambling Behavior," (Austin: Texas Commission on Alcohol and Drug Abuse, 1993); "Gambling in Texas: 1992 Texas Survey of Adult and Adolescent Gambling Behavior," (Austin: Texas Commission on Alcohol and Drug Abuse, 1996).

[183] "Gambling and Related Mental Disorders: A Public Health Analysis."

[184] Shaffer, Hall and Vander Bilt, "Estimating the Prevalence of Disordered Gambling Behavior in the United States and Canada: A Research Synthesis."

[185] Shaffer and Martin, "Disordered Gambling: Etiology, Trajectory, and Clinical Considerations."

advantage of inexpensive meals.[186] The elderly participate in gambling at about the same rate as do other adults.[187] They tend to exhibit gambling disorders at about the same rate as their adult counterparts, but a lower rate than their youth counterparts.[188] Gambling disorder was consistently associated with poorer health among older adults, as it was with their younger counterparts. Interestingly, recreational gambling also was associated with poorer health measures among those 40-64 years of age; however, among adults older than 64 years, recreational gambling, in addition to obesity, was associated with better physical and mental functioning.[189] Other cross-sectional and prospective research has shown that the elderly experience some cognitive, health and social benefits associated with gambling and leaving the house to gamble.[190]

Disease. There is increasing evidence that among those who suffer with movement disorders (e.g., Parkinson's Disease ("PD") or Restless Leg Syndrome), often the older segment of the population, and who receive dopamine agonists ("DA" treatment) for these disorders, might be at higher risk for excessive gambling – as well as a variety of impulse-related – disorders. Because Florida is home to an older and aging segment of the US population, we want to explore this issue in detail.

There is growing evidence suggesting an association between PD and gambling disorder.[191] In general, there is about a 13.6 percent rate of Impulse Control Disorder ("ICD") among PD

[186] D.P. McNeilly and W.J. Burke, "Late Life Gambling: The Attitudes and Behaviors of Older Adults," *Journal of Gambling Studies* 16, no. 4 (2000).

[187] Welte et al., "Gambling Participation and Pathology in the United States--a Sociodemographic Analysis Using Classification Trees."

[188] Dave Clarke, "Older Adults' Gambling Motivation and Problem Gambling: A Comparative Study," *Journal of gambling studies / co-sponsored by the National Council on Problem Gambling and Institute for the Study of Gambling and Commercial Gaming* 24, no. 2 (2008).

[189] Rani A Desai, M Mayur, and Marc N Potenza, "Gambling, Health and Age: Data from the National Epidemiologic Survey on Alcohol and Related Conditions," *Psychology of Addictive Behaviors* 21, no. 4 (2007).

[190] Rani A. Desai et al., "Health Correlates of Recreational Gambling in Older Adults.," *American Journal of Psychiatry* 161, no. 9 (2004); Joni Vander Bilt et al., "Gambling Participation and Social Support Among Older Adults: A Longitudinal Community Study," *Journal of Gambling Studies* 20, no. 4 (2004).

[191] J.A. Molina et al., "Pathological Gambling in Parkinson's Disease: A Behavioral Manifestation of Pharmacologic Treatment," *Movement Disorders* 15, no. 5 (2000); M. Leann Dodd et al., "Pathological Gambling Caused by Drugs Used to Treat Parkinson Disease," *Archives of Neurology* 62, no. 9 (2005); R. Zand, "Is Dopamine Agonist Therapy Associated with Developing Pathological Gambling in Parkinson's Disease Patients?," *European Neurology* 59, no. 3-4 (2008); Atbin Djamshidian et al., "Pathological Gambling in Parkinson's Disease--a Review of the Literature," *Movement Disorders* 26, no. 11 (2011); Valerie Voon et al., "Mechanisms Underlying Dopamine-Mediated Reward Bias in Compulsive Behaviors," *Neuron* 65, no. 1 (2010); Valerie Voon et al., "Frequency of Impulse Control Behaviours Associated with Dopaminergic Therapy in Restless Legs Syndrome," *BMC Neurology* 11(2011); Valerie Voon et al., "Impulse Control Disorders in Parkinson Disease: A Multicenter Case--Control Study," *Annals of Neurology* 69, no. 6 (2011); Valerie Voon et al., "Dopamine Agonists and Risk: Impulse Control Disorders in Parkinson's Disease," *Brain* 134, no. Pt 5 (2011); ibid.

patients.[192] However, the research about PD and ICDs is sometimes inconsistent. For example, there is some evidence that PD itself might be "protective" by its association in some studies with less risky behavior. For example, there are reports of PD being associated with lower rates of novelty seeking, smoking and alcohol use compared with the general population, before the appearance of motor symptoms.[193] Alternatively, there is evidence that PD patients, regardless of DA treatment status, evidence more discounting of future rewards compared to healthy controls, suggesting that PD patients engage in more risky choices than their healthy counterparts.[194]

Some researchers have explained the association between PD and ICDs by dopamine agonist treatment. One hypothesis suggests that DA treatments might increase a tendency to make risky decisions by limiting risk evaluation in the central nervous system.[195] However, there is some evidence that PD, in the absence of DA treatment, might itself be associated with elevated rates of compulsive medication use and other compulsive behaviors. For example, compulsive behaviors associated with PD (e.g., punding) or cognitive changes associated with PD might exacerbate or encourage excessive gambling[196] independent of DA treatment (e.g., depression, obsessive-compulsive disorder, anxiety, impulsivity, novelty-seeking).

If DA treatment caused impulse control disorders ("ICD") such as gambling disorder, we might expect to find a relationship between dosage and ICDs. For example, we might observe that higher DA dosages are associated with more severe, more intense or multiple ICDs and lower dosages associated with more mild, less intense and fewer ICDs. To date, there is little evidence to inform us about this relationship. For example, "published reports have been able to neither demonstrate the extent of risk for gambling-related problems nor study the correlation of dosage with this potential adverse effect among Parkinson's disease patients treated with dopaminergic medications."[197]

Unfortunately, most work on DA treatment and ICDs has been cross-sectional and absent the randomized experimental research designs necessary to establish causation. Consequently, although there is some evidence of an association between DA treatment and ICDs, this body of research has not demonstrated a causal relationship between DA treatment and the development of ICDs such as problem gambling. Some studies have reported that patients with ICDs have

[192] "Dopamine Agonists and Risk: Impulse Control Disorders in Parkinson's Disease."

[193] Valerie Voon et al., "Chronic Dopaminergic Stimulation in Parkinson's Disease: From Dyskinesias to Impulse Control Disorders," *The Lancet Neurology* 8, no. 12 (2009).

[194] Maria Milenkova et al., "Intertemporal Choice in Parkinson's Disease," *Movement Disorders* 26, no. 11 (2011).

[195] Voon et al., "Dopamine Agonists and Risk: Impulse Control Disorders in Parkinson's Disease."

[196] Voon et al., "Impulse Control Disorders in Parkinson Disease: A Multicenter Case--Control Study."

[197] Zand, "Is Dopamine Agonist Therapy Associated with Developing Pathological Gambling in Parkinson's Disease Patients?," 183.

received DA treatment more and at a higher dosage than those without such disorders; this association, however, does not indicate whether the treatment is a result of the ICD or vice versa. In addition, some research shows that being female, developing a dopamine-associated disorder (e.g., Restless Leg Syndrome) at a younger age, receiving DA treatment, and having a family history of disordered gambling are associated with the presence of ICDs.[198] Voon, Schoerling, et al. concluded "None of the RLS patients identified with impulse control behaviors in this study attributed their ICB symptoms to dopaminergic treatment" (p. 5). Similarly, others have concluded that an adverse effect of DA treatment is associated with susceptible users,[199] and that there are many interactive factors associated with the emergence of pathological gambling ("PG") and other ICDs.[200] Perhaps the association among the variety of risk factors and ICDs such as PG is best summed up by the following conclusion from a case control study:

> These findings suggest that multiple psychiatric and personality features contribute similarly to a range of ICDs in PD. However, dyskinesia was not associated with single ICDs but with multiple ICDs. Dyskinesia has been associated with punding behaviors and compulsive medication use, suggesting potential overlapping mechanisms across a range of excessive repetitive motoric behaviors perhaps linked to dopaminergic modulation.[201]

In a recent study of Finnish patients with PD, investigators examined the prevalence of ICDs and depression.[202] These investigators estimated that 7 percent of the PD evidenced PG. Importantly, Joutsa et al. reported that depressive symptoms were statistically the most important factor in explaining the variance associated with Impulse Control Disorder risk, explaining more of the variance than even sex, age, age of disease onset, alcohol use or medication. Also important, these investigators failed to identify an association between DA treatment and ICDs.[203]

The prevalence of ICDs among those with PD is interesting and important. The prevalence of ICDs, in general, is about 14 percent, and people with PD evidence about a 3.9 percent prevalence of having two or more concurrent ICDs. Delaney et al.[204] conclude, "…while the evidence that ICDs in people with PD result from a purely biological process is significant, biological processes cannot easily explain some aspects of the occurrence of these behaviours.

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[198] Voon et al., "Frequency of Impulse Control Behaviours Associated with Dopaminergic Therapy in Restless Legs Syndrome."

[199] Voon et al., "Mechanisms Underlying Dopamine-Mediated Reward Bias in Compulsive Behaviors; Voon et al., "Dopamine Agonists and Risk: Impulse Control Disorders in Parkinson's Disease."

[200] Voon et al., "Impulse Control Disorders in Parkinson Disease: A Multicenter Case--Control Study."

[201] Ibid., p. 994.

[202] Juho Joutsa et al., "Impulse Control Disorders and Depression in Finnish Patients with Parkinson's Disease," *Parkinsonism and Related Disorders* 18, no. 2 (2012).

[203] Ibid.

[204] Mary Delaney et al., "Impulse Control Disorders in Parkinson's Disease: A Psychosocial Perspective," *Journal of Clinical Psychology in Medical Settings* 19, no. 3 (2012).

Indeed, it remains unclear why some people taking DAs develop ICDs, but the majority do not" (p. 339). "Furthermore, ICDs have been shown to occur in other chronic medical conditions in the absence of explicit dopaminergic involvement, including heart disease and arthritis …, dementia … and multiple sclerosis. Additionally, Tourette's syndrome, which is considered to be a hyperdopaminergic disorder … is not linked to reports of ICDs. Therefore, the relationship between ICDs and dopamine dysregulation is not as clear as some have suggested" (p. 340). It is likely that psychosocial factors explain a meaningful part of the relationship between PD and the development and maintenance of ICDs such as PG.

c. Comorbidity

Comorbidity is common among people with gambling disorders.[205] Versions of the Diagnostic and Statistical Manual of Mental Disorders ("DSM") that have included gambling disorder as a distinct disorder also have observed that other disorders may coexist with gambling disorder. For example, DSM-IV notes that pathological gamblers "may be prone to developing general medical conditions that are associated with stress.... Increased rates of Mood Disorders, Attention-Deficit Hyperactivity Disorder, Substance Abuse or Dependence, and Antisocial, Narcissistic, and Borderline Personality Disorders have been reported in individuals with Pathological Gambling."[206] DSM-V provides similar and continuing support for the importance of understanding the role of comorbidity when evaluating gambling disorders.[207]

Clinicians often report that patients who seek treatment for gambling disorder have a variety of social problems caused by gambling. However, treatment seekers are very different from people who have gambling problems but do not seek treatment.[208] Treatment seekers typically have a greater variety and intensity of psychological problems compared with their counterparts who do not seek treatment. In a recent national study, there were no gambling treatment seekers identified among the participants, however, about half of those who were identified as having a gambling disorder reported receiving treatment for other mental health problems.[209]

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[205] Andrew Boudreau, Richard LaBrie and Howard J. Shaffer, "Towards DSM-V: "Shadow Syndrome" Symptom Patterns among Pathological Gamblers," *Addiction Research & Theory* 17, no. 4 (2009); Ronald C. Kessler et al., "DSM-IV Pathological Gambling in the National Comorbidity Survey Replication," *Psychological Medicine* 38(2008).

[206] American Psychiatric Association, *DSM-IV: Diagnostic and Statistical Manual of Mental Disorders*, Fourth ed. (Washington, D.C.: American Psychiatric Association, 1994), 616.

[207] American Psychiatric Association. DSM-5 Task Force, *Diagnostic and Statistical Manual of Mental Disorders: DSM-5*.

[208] J. Berkson, "Limitations of the Application of Fourfold Table Analysis to Hospital Data," *Biometrics* 2(1946).

[209] Kessler et al., "DSM-IV Pathological Gambling in the National Comorbidity Survey Replication."

Evidence is unequivocal for the relationship between substance use and gambling disorders. Among those with gambling disorder, there are increased rates of substance use disorders, whether the psychoactive substance is beverage alcohol, nicotine or illicit drugs.[210] In a longitudinal study of college students, researchers identified that participants who played cards, casino/slots and involved in extensive gambling groups evidenced higher scores on alcohol/drug use, novelty seeking and self-identified gambling problems compared to those who investigators classified into a low-gambling group.[211]

Individuals with concurrent psychiatric and psychological problems also display much higher rates of gambling disorder. There are increased rates of mood disorders, attention-deficit/ hyperactivity disorder, other impulse-control disorders and antisocial, narcissistic and borderline personality disorders among pathological gamblers.[212]

Recent studies have reported that gambling disorder is significantly associated with other pre-existing mental disorders. In fact, in a scientific community sample, psychiatric comorbidity predated gambling disorder for 74.3 percent and followed gambling disorder for about 23.5 percent of the comorbid cases.[213] This research reveals that other mental disorders typically predate the onset of co-occurring gambling disorder and predict the subsequent onset and persistence of gambling disorder. Similar age of onset results have been observed for cocaine and alcohol-related disorders.[214]

d. Gaming Employees

Casino employees represent a unique and conceptually important segment of the Florida population, with full access and exposure to gambling compared to the general public. Casino employees have higher levels of gambling, smoking, drinking and mood disorder compared to the

[210] Renee M. Cunningham-Williams et al., "Problem Gambling and Comorbid Psychiatric and Substance Use Disorders among Drug Users Recruited from Drug Treatment and Community Settings," *Journal of Gambling Studies* 16, no. 4 (2000); Kessler et al., "DSM-IV Pathological Gambling in the National Comorbidity Survey Replication."

[211] Anna E Goudriaan et al., "Longitudinal Patterns of Gambling Activities and Associated Risk Factors in College Students," *Addiction* 104, no. 7 (2009).

[212] Jon E. Grant and Marc N. Potenza, *Pathological Gambling: A Clinical Guide to Treatment*, 1st ed. (Washington, DC: American Psychiatric Publishing, Inc., 2004); Kessler et al., "DSM-IV Pathological Gambling in the National Comorbidity Survey Replication; Petry, *Pathological Gambling: Etiology, Comorbidity, and Treatment*.

[213] Kessler et al., "DSM-IV Pathological Gambling in the National Comorbidity Survey Replication."

[214] C.B. Nelson, A.C. Heath, and R.C. Kessler, "Temporal Progression of Alcohol Dependence Symptoms in the U.S. Household Population: Results from the National Comorbidity Survey," *Journal of Consulting & Clinical Psychology* 66, no. 3 (1998); Howard J. Shaffer and Gabriel B. Eber, "Temporal Progression of Cocaine Dependence Symptoms in the National Comorbidity Survey," *Addiction* 97(2002).

general population.[215] In addition, gambling problems, like the abuses of alcohol, tobacco, opiates and cocaine, are more dynamic than conventional wisdom suggests. People frequently move toward more healthy or more disordered states during their involvement with gambling.[216] Further, concurrent psychiatric and alcohol or other substance use problems are likely to influence transitions to more disordered states and impede changes to less disordered states. For example, the first multiyear prospective study of casino employees indicated that people troubled with gambling, drinking or both shifted these behavior patterns regularly; in addition, these changes tended toward reduced levels of disorder rather than the increasingly serious problems often suggested by a traditional view of addictive behavior patterns.[217] However, this study did not examine the pathways to recovery for casino employees. If gambling disorders are similar to other addictions, there is a vital gap in the literature because most people with gambling-related problems probably escape this circumstance without treatment.[218] Prospective research designs are necessary to establish the extent of natural recovery and the determinants that influence the transition from problem to non-problem gambling or abstinence.

B. Crime Rates[219]

One of the most common concerns with the introduction or expansion of casinos is crime. Many observers raise the crime issue as one of the major negative impacts of casinos that may offset the potential economic benefits from the introduction of casinos. The impact of gambling and gambling disorder on crime and economics is a complex matter. This complexity emerges because crime and economics are influenced by many dynamic interactive factors that ebb and flow at a variety of levels (e.g., community, region, nation).

Fortunately, the relationship between casinos and crime is actually one of the issues on which there is a good history of academic research (for this young field), for a variety of US

[215] Shaffer and Hall, "The Natural History of Gambling and Drinking Problems among Casino Employees; Shaffer, Vander Bilt and Hall, "Gambling, Drinking, Smoking and Other Health Risk Activities among Casino Employees."

[216] Howard J. Shaffer et al., "Toward a Syndrome Model of Addiction: Multiple Expressions, Common Etiology," *Harvard Review of Psychiatry* 12, no. 6 (2004).

[217] Shaffer and Hall, "The Natural History of Gambling and Drinking Problems among Casino Employees."

[218] Wendy S. Slutske, "Natural Recovery and Treatment-Seeking in Pathological Gambling: Results of Two U.S. National Surveys," *American Journal of Psychiatry* 163, no. 2 (2006); Wendy S. Slutske, Kristina M. Jackson, and Kenneth J. Sher, "The Natural History of Problem Gambling from Age 18 to 29," *Journal of Abnormal Psychology* 112, no. 2 (2003); Wendy S. Slutske et al., "Pathological Gambling Recovery in the Absence of Abstinence," *Addiction (Abingdon, England)* 105(2010).

[219] The review is drawn from Douglas Walker, "Casinos and Crime: A Review of the Literature," chapter 16 in *Casinonomics: The Socioeconomic Impacts of the Casino Industry* (New York: Springer, 2013); and Douglas Walker, "Casinos and Crime in the USA," in Bruce Benson and Paul Zimmerman, eds., *Handbook on the Economics of Crime* (Northampton, MA: Edward Elgar, 2010), p. 488-517.

jurisdictions. In this section, we review some of the academic literature that addresses the relationship between casinos and crime in the United States. The review begins with theoretical treatments of the casino-crime link, followed by a discussion of selected papers and key issues.

Most of the published studies on casinos and crime utilize data from the FBI's *Uniform Crime Reports* ("UCR"). The Index I crimes examined include aggravated assault, rape, robbery, murder, larceny, burglary and auto theft. Obviously crimes such as robbery, larceny and burglary are more likely to be linked to casinos than are rape and murder (and studies confirm this). Different analyses test for a statistical difference in the amount of crime or the crime rate before and after the introduction of casinos in a particular jurisdiction. Most of the crime studies have examined cities or counties.

1. Theories of Crime

There are several "common sense" reasons one might expect there to be a link between casinos and crime. Crime may increase with the introduction of a casino in a city simply because casinos attract a large number of patrons. This means there are more potential criminals and more potential victims in the area. Then it would hardly be surprising if more criminal activity occurred after the opening of a casino. Alternatively, it might be that casino patrons – as a group – are more likely to commit crimes than non-casino patrons. Another possibility is that since some casino patrons carry large amounts of cash, existing criminals in an area may be incited to engage in more crime than they might otherwise.

In their 2006 paper on casinos and crime,[220] Grinols and Mustard offer two explanations for why casinos might reduce crime, and five explanations for why crime might rise because of casinos being introduced (p. 31-32). We paraphrase their explanations:

Casinos reduce crime:

- Wage effects: If casinos have a positive impact on wages, then the motivation for committing crimes may be reduced.
- Development: If casinos bring economic development, more residents, safer streets, etc., then there may be less crime.

Casinos increase crime:

- Development: Casinos could have a negative development effect, attracting "unsavory clients" and draining the local economy.
- Increased payoff to crime: Casinos attract patrons with money, increasing potential victims and potential gains from engaging in crime.

[220] Earl L. Grinols and David B. Mustard, "Casinos, Crime, and Community Costs," *Review of Economics and Statistics*, Volume 88, 2006, p. 28-45.

- Problem gambling and gambling disorder: The spread of casinos makes it likely that there would be an increase in problem gambling and, hence, the potential for increased crime among this population.
- Visitor criminality: Casinos may attract visitors who are more prone to commit and be victims of crime.
- Casino-induced changes in population composition: Casino expansion may increase the proportion of unskilled workers, who may be more apt to engage in criminal activity.

One can imagine a variety of other explanations for why there may be a link between casinos and crime. However, there are three major theories of crime from the academic literature that perhaps most concisely explain why there may be a casino-crime link. We briefly explain each of these.

One theory that focuses on the individual criminal is the economic theory of crime.[221] This theory views the individual criminal as a rational actor, who engages in crime after a cost-benefit analysis. In particular, they consider the expected benefit of engaging in crime, and offset that with the expected costs. A crime is committed only if the expected benefits to the would-be criminal outweigh the expected costs. These costs include the penalty of being caught adjusted by the probability of being caught. According to this theory, one might expect a link between casinos and crime because at a casino, there are many individuals who carry large amounts of cash. This represents a large benefit for a would-be thief. On the cost side, however, there may be a high probability of being caught, as casino security is generally very keen.

A second theory of crime is the "routine activities theory."[222] This theory suggests that criminal activity increases when three conditions occur simultaneously: presence of likely offenders, presence of suitable targets, and a lack of enforcement against crime. A new casino development may be seen as providing optimal conditions for an explosion in crime, as a casino may draw criminals and victims to the same place, with a less-than-proportionate increase in law enforcement. However, one must consider that the security measures at casinos are generally very effective.[223]

[221] The "economics of crime" field was pioneered by Gary Becker. See Gary S. Becker, "Crime and Punishment: An Economic Approach," *Journal of Political Economy*, Volume 76, 1968, p. 169-217.

[222] Lawrence E. Cohen and Marcus Felson, "Social Change and Crime Rate Trends: A Routine Activity Approach," *American Sociological Review*, volume 44, 1979, p. 588-608.

[223] This raises the issue of whether crimes are committed on the casino premises or off. The issue is addressed in some detail in Daniel Curran and Frank Scarpitti, "Crime in Atlantic City: Do Casinos Make a Difference?" *Deviant Behavior*, Volume 12, p. 431-449.

The third relevant concept is the "hot spot theory" of crime.[224] This is closely related to the routine activities theory. It holds that a majority of crimes occur in very few/small geographic areas – that criminal activity is concentrated in "hot spots." If a casino is introduced in a city and there is a casino-crime link, then a casino may act as a hot spot for crime.

Next, we briefly discuss the published studies that analyze the relationship between casinos and crime in the United States. Using information from Walker's (2013) review,[225] we provide basic results from the different studies, and then we discuss several key casino-crime studies in more detail.

2. Review of Empirical Evidence

The literature that tests for a link between casinos and crime rates comes from the criminology, tourism and more recently, the economics fields. Despite coming from different disciplines, the literature has more in common than one might initially expect. We can summarize what all of these studies do, as a group. As noted above, most crime studies examine the FBI's *Uniform Crime Reports* (UCR) data. The studies attempt to determine whether the introduction or expansion of casino gambling is related to an increase (or decrease) in reported crimes. The studies typically control for a variety of demographic variables, such as population, average income, race, education, unemployment and age. They sometimes control for other factors, such as the experiences in neighboring jurisdictions and changes to relevant laws.

Perhaps the two key differences among the different casino-crime studies from the literature are: (1) the different jurisdictions and time periods analyzed, and (2) the empirical methodology used. Obviously, as casinos have spread across the United States, researchers have been interested to see whether the relationship of casinos to crime is jurisdiction-specific or more of a general relationship. Researchers tend to use different methodologies because they come from different disciplines and, obviously, because different data are used in different studies, which may require different empirical strategies.

In his review of the literature, Walker divides studies into two categories: "early" (1985-2000) and "recent" (2001-2010). We reproduce Walker's summary tables here. The key result from each study is summarized in the column headed "Casinos Increase Crime Rate?"

[224] Lawrence W. Sherman, Patrick R. Gartin and Michael E. Buerger, "Hot Spots of Predatory Crime: Routine Activities and the Criminology of Place," *Criminology*, Volume 27, 1989, p. 27-55.

[225] Douglas Walker, *Casinonomics: The Socioeconomic Impacts of the Casino Industry* (New York: Springer, 2013), chapter 16.

Figure 103: Casino-crime rate studies, 1985-2000

Study Author(s)	State/Region Studied	Years Analyzed	Year Casinos Opened	Casinos Increase Crime Rate?	Population Adjusted for Visitors?
Albanese[226]	Atlantic City	1978-82	1978	No	Yes
Friedman et al.[227]	Atlantic City	1972-84	1978	Yes	No
Hakim and Buck[228]	Atlantic City	1972-84	1978	Yes	No
Curran and Scarpitti[229]	Atlantic City	1985-89	1978	No	Yes
Giacopassi and Stitt[230]	Biloxi, MS	1991-93	1992	Yes	No
Chang[231]	Biloxi, MS	1986-94	1992	No	Yes
Stokowski[232]	Colorado	1989-94	1991	No	Yes
General Accounting Office[233]	Atlantic City	1977-97	1978	No	Yes

Source: Douglas Walker, *Casinonomics.*

As the table above shows, the earlier studies often focused on Atlantic City. Other studied jurisdictions generally included a limited amount of data. Walker (2013) argues, "Some of these [early] studies are methodologically or empirically weak."[234] It appears from the early studies listed above that there are no consistent findings; some studies found that casinos increase the crime rate, while others do not.

The more recent analyses are, as a group, better quality, using more and better data, which helps to facilitate higher-quality empirical analysis. Yet, as with the earlier studies, the newer study results are mixed. The more recent studies examined some different jurisdictions, including one county-level study for all US counties (Grinols and Mustard, 2006). Interestingly, in a test of the hot spot theory of crime for Reno, NV, Barthe and Stitt (2007) found that the areas immediately around casinos were actually safer than areas farther away.

[226] Jay Albanese, "The Effect of Casino Gambling on Crime," *Federal Probation*, Volume 48, 1985, p. 39-44.

[227] Joseph Friedman, Simon Hakim and J. Weinblatt, "Casino Gambling as a 'Growth Pole' Strategy and its Effect on Crime," *Journal of Regional Science*, Volume 29, 1989, p. 615-623.

[228] Simon Hakim and Andrew J. Buck, "Do Casinos Enhance Crime?" *Journal of Criminal Justice*, Volume 17, 1989, p. 409-416.

[229] Daniel Curran and Frank Scarpitti, "Crime in Atlantic City: Do Casinos Make a Difference?" *Deviant Behavior*, Volume 12, p. 431-449.

[230] David Giacopassi and B. Grant Stitt, "Assessing the Impact of Casino Gambling on Crime in Mississippi," *American Journal of Criminal Justice*, Volume 18, 1993, p. 117-131.

[231] Semoon Chang, "The Impact of Casinos on Crime: The Case of Biloxi, Mississippi," *Journal of Criminal Justice*, Volume 24, 1996, p. 431-436.

[232] Patricia Stokowski, "Crime Patterns and Gaming Development in Rural Colorado," *Journal of Travel Research*, Volume 34, 1996, p. 63-69.

[233] General Accounting Office, "Impact of Gambling: Economic Effects More Measurable Than Social Effects." Available at http://www.gao.gov/products/GGD-00-78.

[234] Ibid, p. 209.

Figure 104: Casino-crime rate studies, 2001-2010

Study Author(s)	State/Region Studied	Years Analyzed	Year Casinos Opened	Casinos Increase Crime Rate?	Population Adjusted for Visitors?
Gazel et al.[235]	Wisconsin (Tribal)	1981-94	(various)	Yes	No
Wilson[236]	Indiana	1992-97	1995	No	No
Evans and Topoleski[237]	National (Tribal only)	1985-1989	(various)	Yes	No
Stitt et al.[238]	Various	1980s-90s	(various)	Mixed	Yes
Betsinger[239]	144 counties in 33 states	1977-2001	(various)	Mixed	No
Grinols and Mustard[240]	National	1977-1996	(various)	Yes	No
Barthe and Stitt[241]	Reno, NV	2003	1937	No	Yes
Reece[242]	Indiana	1994-2004	1995	No	Yes

Source: Douglas Walker, *Casinonomics*.

The bottom line from the studies listed above is that there is no firm link between casinos and crime. However, it turns out that there is one key variable on which casino-crime study results seem to hinge. How the "crime rate" is defined appears to be critical to the results in 15 of the 18 studies listed above. We explore this issue in detail next.

3. 'Crime Rate' Definition

"Crime rate" refers to the number of crimes per capita that are committed or reported in a jurisdiction during a particular period, usually a year. Crime rates usually are expressed as the number of crimes per 100,000 people. A crime rate provides a metric either for how safe (or unsafe) a particular area is or, alternatively, how likely a particular person is to be victimized by

[235] Ricardo C. Gazel, Dan Rickman and William N. Thompson, "Casino Gambling and Crime: A Panel Study of Wisconsin Counties," *Managerial and Decision Economics*, Volume 22, 2001, p. 65-75.

[236] Jerry M. Wilson, "Riverboat Gambling and Crime in Indiana: An Empirical Investigation," *Crime & Delinquency*, Volume 47, 2001, p. 610-640.

[237] William N. Evans and Julie H. Topoleski, "The Social and Economic Impact of Native American Casinos," *NBER Working Paper Series* (Cambridge, MA: National Bureau of Economic Research).

[238] B. Grant Stitt, Mark W. Nichols, and David Giacopassi, "Does the Presence of Casinos Increase Crime? An Examination of Casino and Control Communities," *Crime & Delinquency*, Volume 49, 2003, p. 253-284.

[239] Sara Betsinger, "The Relationship Between Gambling and County-Level Crime," M.A. Thesis, 2005 (College Park, MD: University of Maryland).

[240] Earl L. Grinols and David B. Mustard, "Casinos, Crime, and Community Costs," *Review of Economics and Statistics*, Volume 88, 2006, p. 28-45.

[241] Emmanuel Barthe and B. Grant Stitt, "Casinos as 'Hot Spots' and the Generation of Crime," *Journal of Crime & Justice*, Volume 30, 2007, p. 115-140. "Impact of Casinos on Criminogenic Patterns," *Police Practice and Research*, Volume 10, 2009, p. 255-269. "Temporal Distributions of Crime and Disorder in Casino and Non-Casino Zones," *Journal of Gambling Studies*, Volume 25, 2009, p. 139-152.

[242] William S. Reece, "Casinos, Hotels, and Crime." *Contemporary Economic Policy*, Volume 28, 2010, p. 145-161.

crime. Crime rates can be compared across jurisdictions and through time to evaluate different crime-prevention policies, changes in police enforcement, etc. – or the effect of casinos on crime.

If we let *C* represent crimes committed and *P* represent the population at risk, then the crime rate can be represented as: *Crime Rate = C/P*. The more crimes committed within a given population, obviously the less safe that area is, and the more likely a person in that area is to be victimized by crime. Relatively few casinos in the United States are located in urban settings, although this is certainly changing. When we consider that, often, casinos are located in jurisdictions with relatively small populations, along with the fact that casinos can generate an enormous amount of tourism, it becomes clear that if we wish a crime rate to represent what it is supposed to – the likelihood of being victimized by crime – then we must re-evaluate the denominator of the crime rate (i.e., the population at risk).

If we consider a large city with casinos, such as Detroit, we may not expect the casinos to attract a large number of tourists relative to the resident population. Then the crime rate noted above may be appropriate (*C/P*), since *C* would represent all the crimes committed in the city, while *P* would represent the population at risk, or those people living in Detroit. If we ignore the tourists who do visit Detroit, it probably would not markedly affect the crime rate, assuming the number of tourists is relatively small compared to the resident population.

However, if we consider a casino jurisdiction that has a relatively small population, such as a rural county or town, but whose casino attracts a large number of tourists each year, then using *C/P* as described above will overestimate the crime rate – perhaps dramatically.

Now consider a small county with only 10,000 residents and no tourism to speak of. Assume that 100 crimes are committed each year. Then the crime rate would be 100/10,000, or 1 percent. This indicates that a county resident has a 1 percent chance of being victimized by a crime in any given year.

Now, suppose a casino is built in the county that attracts 1 million tourists per year, who each stay in the county for an average of one day. Since these tourists are within the county and would seem to be equally likely as county residents to be crime victims in the county, the "population at risk" increases with the tourism. If we divide 1 million tourists by 365 days, we get an average of 2,739 tourists each day. Then the population at risk for the county would be the 10,000 residents plus the 2,739 tourists per day, or 12,739. Certainly, the number of crimes committed within the county would be expected to increase, simply because there are so many people coming through the county. We might expect, for example, the number of crimes committed to increase by 27 percent, the same proportion as the increase in population at risk (2,739/10,000); however, visitors to the county may be more likely to engage in crime since it is not their home. Or, as some observers have argued, perhaps casino patrons are more likely to engage in criminal activity than others. In any case, the number of crimes is likely to increase. If we assume it is a 27 percent increase in crimes, then we would now see 127 crimes committed in the casino county.

Many casino-crime studies use a crime rate that includes the increase in crimes committed, but do not adjust the population at risk. In other words, they would calculate the crime rate at 127/10,000, or 1.27 percent. However, this rate will drastically over-estimate the risk of being victimized by crime. The appropriate crime rate would include not only the additional crimes committed by tourists but also would adjust the population at risk by the visitors. Making both adjustments would yield a crime rate of only 127/12,739, or 1 percent – the same as before the casino was introduced. Thus, the failure to adjust the population at risk by the tourists to the county, in our example, causes an overstatement of the crime rate by 27 percent.

Rates that do not adjust for visitor population create inaccurate assessments for many casino communities, but also for tourism centers in general. For example, Orlando is often listed as one of the most dangerous communities when looked at solely by its crime rate. The web site Neighborhood Scout lists Orlando as no. 67 on its list of 100 most dangerous cities, ahead of such urban centers as Chicago and Elizabeth, NJ.[243] Two years ago, *US News & World Report* ranked Orlando as the third most dangerous city, tied with Birmingham, Alabama.[244] In our research, few of the analyses that list such rankings note the disparity between tourist centers and residential centers.

Now revisiting the two tables above that listed the various casino-crime studies, consider the right-most column ("Population Adjusted for Visitors"). This column indicates whether the crime rate used in the study includes the visiting population in the population at risk (i.e., the denominator of the crime rate). When comparing this column to the column to the left (whether the study finds "Casinos Increase Crime Rate"), we note that 15 of the 18 studies reviewed are Yes/No or No/Yes combinations. That is, if a study finds that casinos increase crime, that study did not adjust the population at risk by visitors (or tourists) to the jurisdiction – a Yes/No combination. Or if a study yields a No/Yes combination, it means that the study did not find a casino-crime link, and the study did adjust the population measure of the crime rate by the visitors to the jurisdiction. The fact that the large majority of crime studies' results seem to hinge on this issue suggests that how the crime rate is defined is absolutely critical.

Based on the studies reviewed above, the only reasonable conclusion seems to be that there is no strong evidence that casinos inevitably lead to an increase in crime. But there is no strong evidence that they reduce crime either. The safest conclusion is probably that the effect of casinos on crime is case-specific.

Next, we provide a more detailed review of several key studies, as well as information from a study published more recently than Walker's (2013) comprehensive review.

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[243] http://www.neighborhoodscout.com/neighborhoods/crime-rates/top100dangerous/ (accessed September 28, 2013)

[244] By Danielle Kurtzleben, "11 Most Dangerous Cities," *US News & World Report*, February 16, 2011 http://www.usnews.com/news/articles/2011/02/16/the-11-most-dangerous-cities

4. Detailed Reviews

One of the best casino-crime studies to date is a 2003 study that paired six new casino jurisdictions to six control communities.[245] The analysis compares the crime rates in casino communities with their control communities. They analyze both resident population and population at risk. As noted in the table above, their results were mixed; they found that in casino communities, rates for certain crimes increased, while others decreased. More to the point, in some casino communities, more types of crimes decreased than increased, relative to their control communities, while in other casino communities, more types of crime increased than decreased. The main point from this study may be that the effect of casinos on crime is likely to be different for different jurisdictions.

The 2006 study by Grinols and Mustard[246] is probably the most comprehensive study on casinos and crime to date. This study examined crime at the county-level in the United States from 1977 through 1996. The authors tested how the presence of a casino in a county affected crime rates. Their data set on county-level casinos is one that allows for a more comprehensive study than any other analysis that has been published. The authors found that roughly 8 percent of crime in casino counties is attributable to casinos. Unfortunately, it is almost certain that their results overstate the crime impact of casinos because the authors did not adjust the population at risk for county visitors.[247] Grinols and Mustard had little choice, however, as county-level visitor data are generally not available. Another serious problem with the analysis is that the authors cannot distinguish between crime generated as a result of tourism, in general, and casino-related tourism.

The 2010 study by Reece[248] looked at the casino-crime question in Indiana. It represents a significant improvement over the Grinols and Mustard study because it controls for several factors that Grinols and Mustard were unable to control. First, Reece was able to control for the number of visitors to the casinos in Indiana through turnstile counts. Second, Reece was able to control for tourism, in general, because his model included the number of hotel rooms in each county. Third, Reece included a variable to control for law enforcement. These three controls represent a significant improvement over other papers in the literature, and particularly over the Grinols and Mustard paper. Reece's analysis suggests that new casinos increase burglaries, but reduce car thefts and aggravated assaults. Increases in casino turnstile counts are associated with lower rates

[245] B. Grant Stitt, Mark W. Nichols and David Giacopassi, "Does the Presence of Casinos Increase Crime? An Examination of Casino and Control Communities," *Crime & Delinquency*, Volume 49, 2003, p. 253-284.

[246] Earl L. Grinols and David B. Mustard, "Casinos, Crime, and Community Costs," *Review of Economics and Statistics*, Volume 88, 2006, p. 28-45.

[247] For a detailed analysis of this, and other problems with the Grinols and Mustard study, see Douglas Walker, "Evaluating Crime Attributable to Casinos in the U.S.: A Close Look at Grinols and Mustard's 'Casinos, Crime, and Community Costs'." *Journal of Gambling Business and Economics*, Volume 2, 2008, p. 23-52.

[248] William S. Reece, "Casinos, Hotels, and Crime." *Contemporary Economic Policy*, Volume 28, 2010, p. 145-161.

of larceny, car theft, aggravated assault and robbery.[249] Overall, Reece's results suggest that casinos do not generate higher crime rates. But, as other studies have found, Reece concludes that some crimes may increase, but overall the amount of crime falls.

Finally, the relatively new paper by Park and Stokowski[250] is likely the first in the literature to successfully isolate casino-based tourism from other types of tourism, with respect to tourism's impact on crime. These authors tested the impact of different types of tourism attractions on county-level crime rates. The types of tourism tested were: casinos, snow skiing, "natural resource access counties" and cultural tourist attractions. The authors examined crime rates in 24 Colorado counties. Each county had only one type of major tourist attraction. The analysis controlled for average daily traffic volume, number of employees in police services, and growth level (measured by population, per capita income, local government revenue, retail sales).[251] Interestingly, Park and Stokowski found that "gaming counties did not show significant differences in crime rates compared to other types of tourism communities."[252] This finding raises questions about other studies that have linked casinos and crime, as no previous study has fully isolated casino-specific tourism from tourism. However, there is (at least) one important caveat to keep in mind. Casinos in Colorado are relatively small, and the crime results found for them may not reflect casinos in other jurisdictions or their relationships to crime in those jurisdictions.

5. Overview of Crime Literature

As is clear from the sample of papers discussed in this section, there have been numerous studies of the relationship between casinos and crime over the past several decades. A significant number of these studies were during the 1980s and focused on Atlantic City. However, as casinos spread throughout the United States, the question became more interesting to politicians and voters, and researchers increased their attention to the casino-crime question.

The evidence appears to be split: About half of research papers suggest that casinos exacerbate crime, on net, whereas the other half finds no statistically significant impact. However, as we emphasize, this finding appears to depend on how the crime rate is defined. Those studies that calculate the crime rate using only the jurisdiction's resident population tend to find that casinos increase crime rates. Yet, those that use the "population at risk" (i.e., resident plus tourist population) in calculating the crime rate tend not to find a significant relationship between casinos and crime. Because the purpose of crime rates is to indicate the likelihood of being victimized by

[249] Reece, p. 157.

[250] Minkyung Park and Patricia A. Stokowski, "Casino Gaming and Crime: Comparisons Among Gaming Counties and Other Tourism Places," *Journal of Travel Research*, 2011, p. 289-302.

[251] Ibid, p. 292.

[252] Ibid, p. 299.

crime, we regard the use of the population at risk as being more appropriate, especially in measuring crime rates in jurisdictions with a significant amount of tourism.

Lastly, there is only one study of which we are aware that attempts to isolate casino-specific tourism from other forms of tourism when testing for a link to crime.[253] That study found that casino-tourism was no more likely than the other forms of tourism tested to cause crime.

As we have noted in prior Spectrum reports, former New Jersey Governor Brendan Byrne – who was in office when New Jersey became the first state outside Nevada to offer legal casino gambling – has been asked often whether crime increased in Atlantic City since casino gambling began in 1978. Byrne said: Of course crime increased. Before casinos, there was nothing in Atlantic City to steal. [254]

US Supreme Court Justice Stephen G. Breyer wrote a dissenting opinion in a 2008 court decision overturning a District of Columbia ban on handguns. In that opinion, Breyer noted the risks in assuming causal relationships. The increase in crime in the district since the imposition of strict gun control laws in 1978 might lead one to conclude that the ban fueled the increase in crime. In Breyer's opinion, he wrote, "As students of elementary logic know, 'after it' does not mean 'because of it.'" [255]

In the context of understanding the potential impact of casinos, our longstanding position is that the wisdom of both Byrne and Breyer should be heeded. Complex issues often defy efforts to impose simple cause-and-effect relationships.

In conclusion, although many researchers have studied the issue, there is no consensus. More to the point, there is insufficient evidence to have confidence either that there is no relationship between casinos and crime, or that there *is* a relationship. The most appropriate conclusion would seem to be that any link between casinos and crime is probably market/jurisdiction-specific.

Indeed, that conclusion is borne out in work that Spectrum has performed over the past decades, including an in-depth 2009 study on the impacts of gaming on the state of Connecticut. That report concluded that, while Connecticut experienced the development of two tribal destination resorts, local communities were often left unprepared for the impacts, which were made worse by policies in that state that effectively reduced the role of regional governments. Our report noted the following:

Norwich, the largest municipality in the region, is coping with a number of problems. It is

[253] Minkyung Park and Patricia A. Stokowski, "Casino Gaming and Crime: Comparisons Among Gaming Counties and Other Tourism Places," *Journal of Travel Research*, 2011, p. 289-302.

[254] Byrne, a popular speaker known for his wit, has used that example many times in our presence, most recently at a dinner in Atlantic City held on November 28, 2007.

[255] Adam Liptak, "Gun Laws and Crime: A Complex Relationship," *New York Times*, June 29, 2008 http://www.nytimes.com/2008/06/29/weekinreview/29liptak.html?pagewanted=all&_r=0

located within eight miles of both casinos. DUI arrests have more than doubled since 1992. Montville and Ledyard have also experienced significant increases. Roughly 20 percent of the motorists in Montville, Ledyard and North Stonington arrested for DUI acknowledged to police that their last drink was at a casino. One such motorist was charged with manslaughter in March 2009 for allegedly causing a fatal accident by driving the wrong way on I-395.

Norwich … officials estimate casino-related costs to be anywhere from $1 million to $2.5 million a year. They include:

- A 27 percent increase in motor vehicle accidents from 1991 to 2004.
- An increase in police overtime from $85,000 in 1991 to more than $280,000 in 2008.
- A 76 percent increase in calls for service from people needing the assistance of the police from 1992 to 2004.

State and federal law enforcement officials made 43 embezzlement arrests in 1992, the year the first Indian casino opened. In 2007, the most recent year that statistics are available, the number increased to 214. No other state that reported 40 or more embezzlements in 1992 has had a higher percentage increase than Connecticut. The percentage increase in Connecticut from 1992 to 2007 is nearly 400 percent; nationwide the increase was 38 percent.[256]

The key lesson from our Connecticut study was that proper planning at multiple levels of government, as well as a better allocation of resources, could have made a critical difference in the nature of such demands on public services, and in the ability of government to respond.

C. Dimensional Assessment of the Gambling Expansion Literature

[See Appendix I for our quantitative analysis of selected peer-reviewed and gray literature assessed for methodological quality, extent of gambling expansion, and extent of social impact.]

Florida is considering several gambling expansion scenarios. Unfortunately, the scientific and scholarly literature does not map cleanly onto the Florida scenarios under consideration. An evidence-based evaluation of each scenario with respect to the literature is not possible. This means that any specific discussion of these scenarios and the probable social impact of one expansion scenario versus another will rest upon assumptions and suppositions that derive from outside the

[256] "Gambling in Connecticut: Analyzing the Economic and Social Impacts," Spectrum Gaming Group, June 22, 2009, p. 13-14

scientific literature. Rather than offering an opinion on these matters, we will restrict our analysis to an evidence-based discussion that addresses gambling expansion options.

To begin our perspective on gambling expansion and its potential impact on Florida and Floridians, it is important to keep in mind that the scientific literature that provides the evidence for understanding gambling expansion and its potential effects is limited by middling methodology and mixed results. Consequently, although the research reveals that expansion seems to have little impact on the extent of gambling-related problems, the methodological weakness inherent in this body of work precludes a confident conclusion that gambling expansion has little or no impact on gambling-related problems. Furthermore, there is no current evidence to suggest that expansion complexity, as measured by types of gambling, numbers of venues and introductory exposure, is related to clinical level social impact changes. As noted in the general introduction to this chapter, it is important to remember that jurisdictions like Florida that already have considerable exposure to legalized gambling and gambling opportunities are less likely to be impacted by additional gambling compared to settings that are newly exposed to gambling, and perhaps ambling naïve.

To gain precision regarding the social impact and costs of any expanded gambling that occurs, it will be necessary for Florida to complete prospective longitudinal data collection. Absent prospective longitudinal research designs, it is difficult at best to determine the impact of expanded gambling in Florida or anywhere else. The following discussion describes the importance of developing and implementing a prospective longitudinal design to study the impact of expanded gambling.

As our team members described in a recent editorial[257], in the case of measuring the impact of expanded gambling, both the often-used, repeated cross-sectional design and the much-needed prospective intensive cohort study would provide important information. However, both of these designs are quasi-experimental. Consequently, both of these designs are vulnerable to a variety of challenges to internal and external validity (e.g., history, selection, maturation, interaction of testing and exposure)[258]. Both quasi-experimental designs offer investigators an opportunity to interpret differences in variables across time and space from the naturally occurring "intervention" of expanded gambling. In both cases – repeated cross-sectional and prospective cohort – the environment is not well-controlled; historical events or contextual changes unrelated to gambling changes might influence the variables of interest.

The primary difference between the repeated cross-sectional and prospective cohort design is that one measures differences across individuals and the other measures change within individuals. With a repeated cross-sectional design, investigators can produce prevalence estimates

[257] Howard J. Shaffer et al., "Can Massachusetts Evaluate the Impact of Its Gambling Expansion?," Op-Ed, *The Brief Addiction Science Information Source (BASIS)* no. June 10 (2013), http://www.basisonline.org/opededitorials/.

[258] Donald T. Campbell and Julian C. Stanley, *Experimental and Quasi-Experimental Designs for Research* (Chicago: Rand McNally & Company, 1963).

at multiple time points. From differences between and among those estimates, researchers can then attempt to infer whether and how the intervening event, namely gambling expansion, might be associated with the observed differences across the estimates. Unfortunately, inter-sample differences obscure any possible conclusions. With a prospective cohort design, the same basic approach is used, but in addition to repeated prevalence rates, we can observe within-individual change. It is vital to examine the same people who have been exposed to gambling and gambling expansion over long periods. Through this research design can we can have more confidence that we can identify the long-term effects of gambling and the course of these effects. Thus, prospective longitudinal studies achieve four primary objectives that a cross-sectional design cannot:

1. Reduce noise and measurement error – each data point is compared to another from the same individual, so other variables that differ from individual to individual are controlled.
2. Allow for estimates of incidence (e.g., the new development of gambling problems), remission (e.g., the improvement of existing gambling problems), recurrence (e.g., the re-emergence of earlier gambling problems), and mechanisms of change (e.g., increases in casino venue gambling leading to increased problems) – cross-sectional designs must rely on retrospective data to attempt to reconstruct this information.
3. With suitable sample retention, eliminate the possibility that there are fundamental sample differences that account for distinctions across time points – with cross-sectional designs, because the individuals differ from time point to time point, it is possible that the samples differ in ways that affect their responses to the variables in question.
4. Because it follows the same people over time, allowing for the identification of variables that precede and predict changes in other variables among the cohort, prospective longitudinal designs permit investigators to detect ***impact***. The problems with using cross-sectional research designs to make causal or temporal claims are well-known in the research community.

Successful projects using prospective cohort designs (e.g., the Framingham Heart Study and the Nurses' Health Study) greatly increase our understanding of the mechanisms and order of change, impacts on health, and potential causal links between variables.

D. Social Cost Estimation: Economic Challenges and Illustrations

Political and academic debate over the merits and potential harms associated with legal casino gambling has occurred mostly since the early 1990s, as casinos began to first spread outside of Nevada and New Jersey, and were adopted in a variety of states in the Midwest. Throughout the years since, perhaps the key argument against the expansion of casinos has been that they may generate sizable "social costs" that offset the economic benefits attributable to casinos. Even now, social costs are raised as the major argument against casinos. Indeed, the anti-casino organization

No Casinos Florida lists on its website a variety of studies that examine the social costs of casinos. Such studies often provide grim predictions about what would happen with the expansion of casino gambling. Yet, as states and local communities continue to show interest in casinos, one wonders about the dismal predicted social impacts of casino gambling. In the next section, we introduce different items typically included in social cost estimates. We later turn to definitional and measurement issues in social cost studies.

1. Introduction to 'Social Costs'

To many people, the term "social cost" raises thoughts of social ills, such as crime, divorce, or suicide attributable to excessive gambling. Indeed, a "social cost" literature began to develop during the mid-1990s, which examined these negative impacts of gambling. One of the key problems in the academic literature on social costs, however, is that researchers who have endeavored to identify and/or develop monetary measures of the social costs of gambling have usually not started with a definition of what they are trying to measure. This was a fundamental problem in the literature, which began to garner scholarly and scientific attention during 1999. Even since 1999, however, this area of research has not advanced in any substantive way. The criticism leveled by the National Research Council in 1999 is just as valid today:

> Unfortunately, the state of research into the benefits and costs of gambling generally, and into the costs of pathological gambling specifically, is not sufficiently advanced to allow definitive conclusions to be drawn. Few reliable economic impact analyses or benefit-cost analyses have been done …[259]

One thing generally accepted by all researchers is that whatever social costs are attributable to gambling are the result of problem and pathological gamblers. These are individuals who gamble to an extent that it negatively impacts their professional, personal or financial life.

A list follows of items typically included in social cost studies. We briefly define each of these items.

- Income lost from missed work: Gamblers might skip work to gamble. This is a measure of the value of income the gamblers loses from lost work hours.
- Decreased productivity on the job: Problem gamblers are believed to be less productive on the job, perhaps because they are distracted by thoughts about gambling. This causes them to be less productive on the job.
- Depression and physical illness related to stress: Psychologists note that problem gamblers often suffer from depression. The stress associated with problem gambling (e.g., financial problems) also may lead to physical illness.

[259] National Research Council, *Pathological Gambling: A Critical Review* (Washington, DC: National Academy Press, 1999), p. 157-158. Available at http://www.nap.edu/catalog.php?record_id=6329.

- Increased suicide attempts: People with serious gambling problems may find themselves unable to stop gambling, or they may have mounting bills that they cannot pay. In desperation, some may attempt suicide as the only way of escape.
- Bailout costs: Pathological gamblers may need to be bailed out by friends or relatives. For example, a family member may pay the mortgage to help the gambler out of a tough financial situation.
- Unrecovered loans to pathological gamblers: This is similar to bailout costs, but would be a cash loan, instead, that the gambler does not pay back. From the lender's perspective, this would be a cost.
- Unpaid debts and bankruptcies: If a disordered gambler fails to pay his/her bills, or files for bankruptcy, the unpaid debts due to gambling represent losses to the creditors.
- Higher insurance premiums resulting from pathological gambler-caused fraud: If pathological gamblers engage in fraud, or otherwise act in criminal ways to gain financially (or get money with which to gamble), it may lead to higher insurance premiums for others in society.
- Corruption of public officials: Many casino critics argue that casino interests may corrupt public officials. This may occur through bribes or other means. Monetary measurement of this cost would be particularly difficult.
- Strain on public services: When a casino is built in a small community and the casino's tourists represent a large increase in the local population, public services such as roads, water and sewer, etc., may be strained. Improvements to this infrastructure entail significant costs for the local community.
- Industry cannibalization: The industry cannibalization argument is synonymous with the "substitution effect," which is discussed elsewhere in the Florida report. It represents jobs and profits lost in other businesses or industries that must compete with casinos.
- Divorce caused by gambling: Gambling disorder often takes a toll on personal relationships, sometimes because of dishonesty trying to cover up the extent of gambling, as well as the financial strain that a gambling problem can create or exacerbate. In some cases, the excessive gambling can be a key contributing factor to divorce.
- Abused dollars: The concept of "abused dollars" was introduced during a 1981 study, but more recently, the term has been revived and redefined by Grinols, who defines it as "lost gambling money acquired from family, employers, or friends under false pretenses" (p. 145). Grinols gives the example of money stolen from an employer but not reported to authorities.

This list of cost items (except abused dollars) is taken from Walker's book, which provides a comprehensive discussion and also cites more than 30 research papers and reports that focus on the social costs of gambling.[260] Of course, different papers will cite different categories of cost, as we will see later in this section.

Among the most important reports that have addressed social costs are the National Gambling Impact Study Commission (1999),[261] and the National Research Council's *Pathological Gambling: A Critical Review* (1999).[262] More recently, several comprehensive reports have come out of Canada, including the *Socio-Economic Impact of Gambling ("SEIG") Framework* (2008)[263] and the *Socio-Economic Impact of Gambling in Alberta* (2011).[264]

As an indication of how important the social cost issue is among the research community – and perhaps how much disarray characterizes it – there have been two separate conferences dedicated to trying to develop a workable methodology for defining and measuring social costs. These were the Whistler Symposium (Whistler, British Columbia, September 2000) and the 5th Annual Alberta Conference on Gambling Research (April 2006, Banff, Alberta, Canada). Papers from both conferences have been subsequently published.

2. Monetary Measurement of Social Costs

One of the best papers during the 1990s that represents the social cost literature is by Thompson, Gazel and Rickman.[265] In this report, the authors provide a detailed accounting of "the cost imposed upon society by compulsive gambling" (p. 81). They note that previous studies had not done a very good job at analyzing and quantifying social costs: "… for the most part, we have

[260] Douglas M. Walker, *Casinonomics* (New York, NY: Springer, 2013), p. 155.

[261] National Gambling Impact Study Commission, "Final Report" (Washington, DC: Author, 1999). Available at http://govinfo.library.unt.edu/ngisc/.

[262] National Research Council, *Pathological Gambling: A Critical Review* (Washington, DC: National Academy Press, 1999). Available at http://www.nap.edu/catalog.php?record_id=6329.

[263] Anielski Management Inc. "The Socio-Economic Impact of Gambling (SEIG) Framework: An Assessment Framework for Canada: In Search of the Gold Standard" (Canada: Inter-Provincial Consortium for the Development of Methodology to Assess the Social and Economic Impact of Gambling, 2008). Available at www.anielski.com/Documents/SEIG%20Framework.pdf.

[264] Brad R. Humphreys, Brian P. Soebbing, Harold Wynne, John Turvey and Yang Seung Lee, "Final Report to the Alberta Gaming Research Institute on the Socio-Economic Impact of Gambling in Alberta" (Edmonton, Alberta: Alberta Gaming Research Institute, 2011).

[265] William N. Thompson, Ricardo C. Gazel and Dan Rickman, "Social and Legal Costs of Compulsive Gambling," *Gaming Law Review*, Volume 1, 1999, p. 81-89.

seen only attempts to either list all the cost factors without analysis and without totaling up the effects, or to offer numbers without any indication of how the numbers were determined."[266]

In their own section on research methodology, Thompson et al. do not define what they mean by "social cost." In their section on cost analysis, however, they do list the different categories of "cost" that they consider: "employment costs, bad debts and civil court costs, thefts and criminal justice costs, the costs of therapy, and welfare costs" (p. 87). The decision to include these different items in their social cost estimate appears to be based on the survey instrument they used with Gamblers Anonymous members, in asking them to estimate different amounts in these categories. Thompson et al. explain that their inclusion of these survey items is based on the decision to use a survey instrument developed by Henry Lesieur in the development of their own survey instrument (p. 83).[267]

Thompson et al. surveyed 98 Gamblers Anonymous members in Wisconsin. Based on their analysis of the survey responses, the researchers estimate the annual social cost per compulsive gambler to be $9,469.[268] This amount is derived from the individual cost categories listed in the table below.

Figure 105: Estimated annual social costs of gambling, per disordered gambler

Employment		**$2,941**
Lost work hours	1,329	
Unemployment compensation	214	
Lost productivity/unemployment	1,398	
Bad debts		**1,487**
Civil court		**848**
Bankruptcy court	334	
Other civil court	514	
Criminal justice		**3,498**
Thefts	1,733	
Arrests	48	
Trials	369	
Probation	186	
Incarceration	1,162	
Therapy		**361**
Welfare		**334**
Aid to Dependent Children	233	
Food stamps	101	
Total		***$9,469***

Source: William N. Thompson, Ricardo C. Gazel, and Dan Rickman, "Social and Legal Costs of Compulsive Gambling," Gaming Law Review, Volume 1, 1999, p. 87.

[266] William N. Thompson, Ricardo C. Gazel and Dan Rickman, "Social and Legal Costs of Compulsive Gambling," *Gaming Law Review*, Volume 1, 1999, p. 83.

[267] The Thompson et al. paper does not include the survey items, so these cannot be commented upon further.

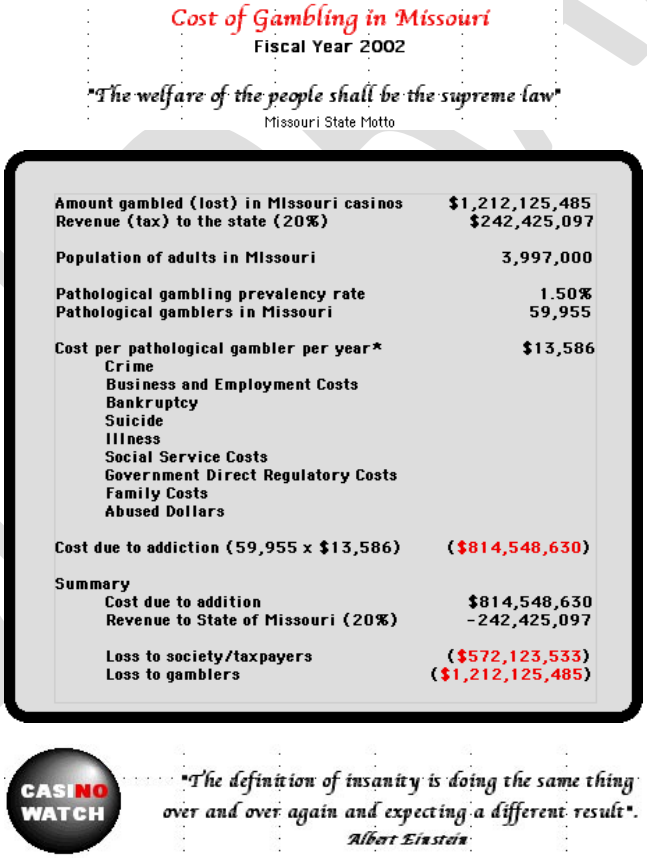
[268] There was actually an arithmetic error in Thompson, Gazel and Rickman's summary table (1997, p. 87). In order to correct it, we have added a dollar to the item "Lost work hours."

The authors provide a detailed explanation for how each of the costs is calculated (p. 88). We will discuss social cost measurement issues later in this section.

Thompson et al. estimate the total cost for Wisconsin at $307 million per year, assuming that 32,425 residents may be compulsive gamblers. In many studies, what is done to derive a "total" social cost for a region or state is to take the estimated social cost per pathological gamble, and multiply it by an estimated number of pathological gamblers in the state/region. This number would be derived by multiplying psychologists' prevalence estimate for gambling disorder (say, 1 percent of the general population) by the population.

Social cost estimates are commonly cited in political debates over casinos. Figure 106, provided by Casino Watch, provides an example of a social cost estimate being used in political debate; this shows how the estimated social costs of gambling far outweigh the tax revenues to the state from the introduction of casinos in Missouri.

Figure 106: Estimated social costs of gambling in Missouri



Source: CasinoWatch.orgwww.casinowatch.org/costs/gambling_costs_mo.html (Accessed July 25, 2013). The website credits a draft of Grinols and Mustard's published paper.[269]

[269] Earl L. Grinols and David B. Mustard, "Business Profitability Versus Social Profitability: Evaluating Industries with Externalities, the Case of Casinos," *Managerial and Decision Economics*, Volume 22, 2001, p. 143-162.

In a social cost study of Las Vegas published during 2005, researchers estimated the social costs of gambling in southern Nevada at between $314 million and $545 million per year.[270] Yet in a response article, it was shown that many of the assumptions used to derive the estimate were questionable or somewhat arbitrary.[271] Indeed, under reasonable alternative economic assumptions, the costs would amount to between $25 million and $44 million per year.[272]

Social cost estimates, such as that developed by Thompson et al. and Thompson and Schwer, were rather commonly cited during the 1990s, despite the fact that there were extremely limited data on social costs. In *Casinonomics* (Table 13.2, p. 162), Walker lists a variety of different monetary estimates of the social costs of gambling. We list those plus several others from the literature:

Figure 107: Social cost estimates from the economics literature (per disordered gambler per year)

Goodman (1995)[273]	$13,200
Grinols (2004)[274]	$13,330
Grinols and Omorov (1996)[275]	between $15,000 and $33,500
Kindt (1995)[276]	$53,000
Maryland (1990)[277]	$30,000
Thompson, Gazel, Rickman (1997)[278]	$ 9,469
Thompson and Schwer (2005)[279]	$19,711

Source: Douglas M. Walker, Casinonomics.

[270] William N. Thompson and Keith Schwer, "Beyond the Limits of Recreation: Social Costs of Gambling in Southern Nevada," *Journal of Public Budgeting, Accounting & Financial Management*, Volume 17, 2005, p. 62-93.

[271] Douglas M. Walker, "Clarification of the Social Costs of Gambling," *Journal of Public Budgeting, Accounting & Financial Management*, Volume 20, 2008, p. 141-152.

[272] Ibid., p. 147.

[273] Robert Goodman, "Legalized Gambling: Public Policy and Economic Development Issues." *Economic Development Review*, Volume 13, 1995, p. 55-57.

[274] Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004).

[275] Earl L. Grinols and J.D. Omorov, "Development or Dreamfield Delusions? Assessing Casino Gambling's Costs and Benefits," *Journal of Law and Commerce*, Volume 16, 1996, p. 49-87.

[276] John W. Kindt, "U.S. National Security and the Strategic Economic Base: The Business/Economic Impacts of the Legalization of Gambling Activities," *Saint Louis University Law Journal*, Volume 39, 1995, p. 567-584.

[277] Task Force on Gambling Addiction in Maryland, 1990. "Final Report." (Baltimore, MD: Maryland Department of Health and Mental Hygiene, 1990.)

[278] William N. Thompson, Ricardo C. Gazel and Dan Rickman, "Social and Legal Costs of Compulsive Gambling," *Gaming Law Review*, Volume 1, 1997, p. 81-89.

[279] William N. Thompson and Keith Schwer, "Beyond the Limits of Recreation: Social Costs of Gambling in Southern Nevada," *Journal of Public Budgeting, Accounting & Financial Management*, Volume 17, 2005, p. 62-93.

Certainly, such large estimated social costs must raise concern over whether legalizing casinos will really create the benefits so often expected from casino expansion.

Unfortunately, monetary social cost estimates cannot always be taken at face value. With such a wide range of estimates, one must wonder if these different studies are measuring the same thing, and if so, then how their methodologies differ. Grinols' 2004 example helps to emphasize this point. Grinols' estimate of $13,330 is based on the average of nine other studies with wide-ranging social cost estimates.[280] Only two or three of these studies were eventually published in peer-reviewed journals. The wide-ranging social cost estimates from the literature raise both methodological and empirical issues.

Critics of such studies have argued that the wide range of monetary estimates is due to (1) lack of a definition of social costs; (2) data problems, including peculiarities in the measurement methodologies; and (3) various confounding factors. We examine each of these issues below.

3. Critiques of Social Cost Estimates

Many of the social cost estimates that have been continually cited in the literature and in political and popular debate over casinos were written back during the mid-1990s. For example, Goodman's estimate of $13,200 was commonly cited because it was one of the first social cost estimates to appear in the literature. Such monetary estimates are repeated often simply because there has been little effort on the part of researchers, policymakers and analysts to assess the validity of such social cost estimates. Walker's work has focused on social cost measurement and methodological concerns. In addition, others have raised similar questions. Perhaps one of the earliest critiques of the state of social cost research was in the National Research Council's book, *Pathological Gambling: A Critical Review* (especially chapter 5).[281]

Chapter 5 in *Pathological Gambling* provided a detailed discussion of the various impacts from gambling disorder (p. 156-162), as well as a review of some studies that were considered to be reasonable at the time the *Pathological Gambling* book was published in 1999 (p. 171-185). It also includes a frank discussion of the problems in the social cost literature at that time, several of which we discuss below. Unfortunately, not much has changed with respect to the quality of research since 1999. We reiterate some of the National Research Council's discussion here because it still seems relevant. Three issues, in particular, are reviewed: (1) use of Gamblers Anonymous members' information for estimating impacts; (2) real versus transfer effects; and (3) tangible versus intangible effects.

The National Research Council warned that many studies on the social costs of gambling base their estimates on the experiences of individuals in treatment, such as Gamblers Anonymous

[280] See Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004), p. 172-174.

[281] National Research Council, *Pathological Gambling: A Critical Review* (Washington, D.C., National Academy of Sciences, 1999). Available at http://www.nap.edu/catalog.php?record_id=6329

members. There is no reason to believe, however, that individuals seeking treatment for their gambling problem are representative of problem gamblers, in general: "… it can be argued that those who seek treatment generally are worse off financially and therefore have amassed larger debts than those not in treatment."[282] If this is the case, then it is inappropriate to generalize "social cost" items such as bad debt expenses from Gamblers Anonymous members to pathological gamblers, in general.

Aside from this, on the issue of debt accumulated by pathological gamblers, the National Research Council notes, what is relevant is not the total amount of debt they accumulate, but rather the amount in excess of the average person's debt. Many individuals carry debt, and the relevant amount over which we might raise concerns is the amount of debt above and beyond what the average person may be expected to accumulate.

These concerns are relevant for any study that has used Gamblers Anonymous members to derive survey data for estimating social costs, or for any study that has relied on pathological gamblers in treatment. The implication is that social cost estimates based on these individuals likely overestimate the social costs of gambling because the cost estimate is based on individuals who are seeking help, rather than on pathological gamblers, in general. Taking average expected debt into account compounds this issue.

A second concern described in *Pathological Gambling* is the confusion between "real" and "transfer" effects.[283] This is an issue that has received much attention in the literature. The National Research Council gives an example of borrowing money as to why it should not be considered a real cost of gambling and, instead, should be considered a transfer effect. When a person borrows money for current consumption (say by taking a loan to buy a car, or making a clothing purchase with a credit card), the person is essentially transferring spending from their future to their present. The credit card balance has to be paid in the future, perhaps with an interest charge. Nevertheless, it is essentially just increasing current spending at the expense of future spending, through an intermediary like a bank or credit card company.

Other impacts of gambling that are included in social cost estimates are simply transfers, with no loss to society. As a result, they do not belong in social cost estimates. We will discuss this issue in more detail below.

A third concern from *Pathological Gambling* is tangible versus intangible effects. There are certain effects that are fairly obvious and easy to measure; these are often the more tangible effects of casinos. However, the intangible effects, difficult as these might be to measure, are just as important when attempting to evaluate the costs and benefits of legal casinos. The tangible

[282] National Research Council, *Pathological Gambling: A Critical Review* (Washington, D.C., National Academy of Sciences, 1999), p. 168. Available at http://www.nap.edu/catalog.php?record_id=6329

[283] National Research Council, *Pathological Gambling: A Critical Review* (Washington, D.C., National Academy of Sciences, 1999), p. 163-164. Available at http://www.nap.edu/catalog.php?record_id=6329

social costs of gambling disorder could include criminal justice and incarceration costs for individuals convicted of gambling-related crimes, and treatment for gambling problems. These costs may be sizable. Yet, certain intangible social costs might be even greater, such as the "psychic costs" or anguish associated with the strain on personal relationships, and other interpersonal problems that are, at the root, caused by a gambling problem. These intangibles defy monetary measurement and usually are not included in social cost estimates from the literature.

The National Research Council notes other problems with research in the area of social costs. Considered as a group, these criticisms raise serious questions about social cost estimates and raise concern whether they should be used at all in informing government policy. This is not to say, of course, that there are not social costs. Indeed, psychologists have done a good job in outlining the *types of harms* often associated with a gambling disorder. Simply put, the science behind putting monetary values on these harms is simply not developed. The National Research Council summarizes:

> Most reported economic analysis in the literature is methodologically weak. In their most rudimentary form, such studies are little more than a crude accounting, bringing together readily available numbers from a variety of disparate sources. Among studies of the overall effects of gambling, such rough-and-ready analyses are common. In the area of gambling, pathological gambling, and problem gambling, systematic data are rarely to be found, despite considerable pressure for information. The consequence has been a plethora of studies with implicit but untested assumptions underlying the analysis that often are either unacknowledged by those performing the analysis, or likely to be misunderstood by those relying on the results. Not surprisingly, the findings of rudimentary economic impact analyses can be misused by those who are not aware of their limitations (p. 162).

Next we discuss several issues in more detail to illustrate why social cost estimates should be used with extreme caution, if they are used at all.

4. Definitional Issues

At the beginning of our discussion, we listed several effects that are typically included in social cost estimates in the literature. We also listed some of the wide-varying monetary estimates from the literature, including the $9,469 estimate from the Thompson et al. paper (1997). Interestingly, the authors of that study do not provide a definition of "social cost" that they are trying to measure. No other study up to that point had defined "social cost" either, prior to trying to estimate its value. This lack of a social cost definition was the focus of a 1999 paper by Walker and Barnet[284] that raised concerns about all studies in the area of social costs.

Walker and Barnett argued that, since researchers have not defined social cost, they use *ad hoc* methodologies in determining what to measure and how to measure it. This lack of definition

[284] Douglas M. Walker and A. H. Barnett, "The Social Costs of Gambling: An Economic Perspective," *Journal of Gambling Studies*, Volume 15, 1999, p. 181-212.

accounts, in part, for the wide variance in monetary estimates of social costs. In their attempt to help move social cost research forward, the authors offered an economic definition of social cost. They posited that social cost is "the amount by which [an] action reduces aggregate societal real wealth" (p. 185). Wealth refers to monetary wealth, but it also includes anything else valued in society, such as clean air. The authors go on to explain that "wealth" also refers to individuals' well-being, and reductions in that can be considered to be social costs (p. 191). This suggests that, for example, the anguish felt by pathological gamblers' families could be included in social cost estimates.

One of the key arguments made by Walker and Barnett is that wealth transfers should not be considered to be social costs, since the cost to one person is offset by a gain to another. Taxes, for example, are also transfers of wealth. The tax revenues benefit the recipient (government, or whomever government gives the tax money to), while there is an equivalent loss, to whomever has to pay the tax. Then the gains and losses are equivalent; there is no net change (loss) in aggregate societal wealth, and so taxes do not represent a social cost (or benefit). We will discuss more of the implications of this definition later.

This argument about transfers is controversial among non-economists. It applies not only to taxes, but also would apply to birthday gifts and even theft. It would apply in any case where benefits to one person or group are offset by the costs to another. The argument made by Walker and Barnett regarding transfers – that they should not be included as social costs of gambling disorder – is generally supported by the National Research Council[285] and in a Federal Reserve report;[286] it is also supported by a variety of researchers, including Eadington,[287] Collins and Lapsley[288] and Single.[289]

Others firmly disagree with the definition of social cost offered by Walker and Barnett. For example, in response to the criticism by Walker and Barnett of the lack of social cost definition in the literature, Thompson, Gazel and Rickman (1999, p. 3) [290] explain,

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[285] National Research Council, *Pathological Gambling: A Critical Review* (Washington, D.C., National Academy of Sciences, 1999). Available at http://www.nap.edu/catalog.php?record_id=6329

[286] Douglas Clement, "Gambling: A Sure Thing?" *Fedgazette* (Minneapolis, MN: Federal Reserve Bank of Minneapolis, 2003). Available at http://www.minneapolisfed.org/publications_papers/pub_display.cfm?id=1831

[287] William R. Eadington, "Measuring Costs from Permitted Gaming: Concepts and Categories in Evaluating Gambling's Consequences," *Journal of Gambling Studies*, Volume 19, 2003, p. 185-213.

[288] David Collins and Helen Lapsley, "The Social Costs and Benefits of Gambling: An Introduction to the Economic Issues," *Journal of Gambling Studies*, Volume 19, 2003, p. 123-148.

[289] Eric Single, "Estimating the Costs of Substance Abuse: Implications to the Estimation of the Costs and Benefits of Gambling," *Journal of Gambling Studies*, Volume 1999, 2003, p. 215-233.

[290] William N. Thompson, Ricardo C. Gazel and Dan Rickman, "The Social Costs of Gambling: A Comparative Study of Nutmeg and Cheese State Gamblers," *UNLV Gaming Research & Review Journal*, Volume 5, 1999, p. 1-15.

> We are defining social costs for our study, we are not deferring to definitions that others make, no matter their status in any academic discipline. The social costs we are seeking to reduce to dollar figures are the costs that the gambler imposes upon people who are not participating in the gambling process as a result of his or her gambling and gambling related activities. The social costs of gambling are burdens that the gambler imposes on others. Others would not have these burdens if the individual were not participating in gambling activities. Social costs ARE cost transfers from one individual who is gambling to others who are not involved in gambling.

Thompson et al. go on to explain that they view it as perfectly fine that different researchers employ different definitions of social cost:

> We reject criticisms of our model which say that *social costs* may not include costs that are imposed upon non-gambling individuals or groups of individuals while not being imposed upon all the members of society…Our critics have suggested that we cannot call theft a social cost. WE DO CALL THEFT A SOCIAL COST… We do not say our critics are wrong. Not at all. They are simply pursuing a different definition of social costs than we are pursuing. It is a matter of apples and oranges.

The key element of the Thompson et al. definition is that social costs generated by pathological gamblers are borne by other people. This certainly sounds reasonable, but there is a "slippery slope" effect, whereby any negative impact that is remotely related to gambling might become included in the social costs of gambling. Perhaps the best example of this is the concept of "abused dollars" first posited by Politzer, Morrow and Leavey in a 1981 conference paper. The paper was published in 1985, and we quote it for the definition of "abused dollars" (p. 133):[291]

> ... [The] amount [of money] obtained legally and/or illegally by the pathological gambler which otherwise would have been used by the pathological gambler, his family, or his victims for other essential purposes. These abused dollars include earned income put at risk in gambling, borrowed, and/or illegally obtained dollars spent on basic needs and/or provided to the family which otherwise would have been "covered" by that fraction of earned income which was used for gambling, and borrowed and/or illegally obtained dollars for the partial payment of gambling related debts.

While this might seem reasonable to include as a social cost, and we can perhaps sympathize with the spirit of "abused dollars," as a concept, it has enormous problems. Walker has discussed these problems in detail.[292] He explains (p. 168):

[291] Robert M. Politzer, James S. Morrow and Sandra B. Leavey, "Report on the Cost-Benefit/Effectiveness of Treatment at the Johns Hopkins Center for Pathological Gambling," *Journal of Gambling Behavior*, Volume 1, 1985, p. 131-142.

[292] Douglas M. Walker, *Casinonomics* (New York, NY: Springer, 2013), p. 168.

> … The concept is too vague to be useful. For example, measuring the amount of dollars spent gambling that "could have been used for other essential purposes" does not provide much information. First, what is an "essential purpose"? The concept loses its meaning once we consider gambler income levels. Is an "essential purpose" for a millionaire the same as for a person with average income? Furthermore, a generous interpretation of "abused dollars" would imply that the sum of all money bet (i.e., handle) represents abused dollars. This is likely to be significantly higher than the actual amount lost by a casino gambler. The concept also treats borrowed money as abused dollars.

Other than in the 1985 paper, the term "abused dollars" had not been used again, to our knowledge, until Earl Grinols resurrected the term in his 2004 book.[293] Grinols (p. 145) defined abused dollars as "lost gambling money acquired from family, employers, or friends under false pretenses. Although this is somewhat more precisely defined than Politzer, Morrow, and Leavey's original definition, it still has problems. How does Grinols (or others) determine whether a situation qualifies as "false pretenses"? More to the point, the range of estimates for abused dollars varies dramatically across studies. In the studies Grinols reports in his book, the range is from $271 to $29,055.[294] This raises serious doubts as to whether the concept has any concrete meaning at all.[295] The wide range of cost in this category certainly highlights the concern about different research methodologies, as one would not expect such a variance across jurisdictions for any particular type of cost.

The fundamental problem with most social cost studies published to date is that they fail to define clearly what they are trying to measure. Although it is clear that such studies attempt to provide some measure of the harms created by problem gambling, it is less clear whether they do a reasonable job. Some studies include certain types of costs; others exclude the same costs. All of this leaves the literature replete with unique studies. As such, the economic literature provides no basis for comparison across jurisdiction or through time. In contrast, psychologists have a very well-defined list of criteria they use for the diagnosis of gambling disorder. Actually, they have several diagnostic instruments, such as the DSM-IV, DSM-V, or SOGS:[296] when one researcher writes that they have used the DSM-IV, for example, other researchers know immediately and exactly what criteria the researcher used. Despite the debates associated with the diagnostic criteria, the criteria are clear. Such clarity is not the case in the social cost literature. This presents

[293] Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004).

[294] Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004), p. 173-174

[295] The problem is probably that Grinols has classified items from the different studies as "abused dollars." We do not believe the different studies did that on their own.

[296] The DSM-IV is the Diagnostic and Statistical Manual, 4th edition, from the American Psychiatric Association. SOGS is the South Oaks Gambling Screen, which comes from a 1987 journal paper.

a significant problem for consumers of such research, if their interest is in understanding the nature of social costs and having an unbiased estimate of their value. Walker notes the importance of having objective criteria for the definition and measurement of social costs:[297]

> Just as objective criteria are useful in estimating the prevalence of pathological gambling, objective criteria are important for the measurement of social costs. Harberger [1971] makes this point in the context of welfare economics, in general, and cost-benefit analyses, in particular: "Just as the road-construction standards that a team of highway engineers must meet can be checked by other highway engineers, so the exercise in applied welfare economics carried out by one team of economists should be subject to check by others."

The main problem with the lack of definition of social cost is that it enables researchers who have a particular bias – either pro- or anti-gambling – to define cost however they like and generate a social cost estimate that is either low or high, tailored to their own political biases. Walker's view is that this is one explanation why researchers such as Goodman, Kindt and Grinols have often produced relatively high social cost estimates.[298] The use of "abused dollars" by Grinols is a specific example of the problem. On the other hand, researchers such as Kindt or Grinols may suggest that Walker's adjustments to social cost estimates by Thompson et al., understate the true social costs of gambling disorder.

As the discussion here has shown, researchers of the social cost of gambling do not even agree on the definition of social cost. This issue is the foundation for other problems in the literature, such as the data and measurement issues discussed in the next section. Although there is not one universally accepted definition of "social cost" in the literature, there appear to be two main schools of thought that have emerged.

First is the more common perspective that anything that appears to be a negative impact associated with problem gambling should be measured (if possible) to develop a social cost estimate. This perspective would seem to be that shared by Thompson et al., Grinols, Goodman, Kindt and Anielski.[299] Studies that rely on this conception of social cost would include all of the social cost categories that were listed at the beginning of this section and possibly others. These types of studies typically do not have a concrete definition/conception of what "social cost" means, or what should be included or excluded. Politicians, voters and interest groups that tend to oppose

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[297] Douglas M. Walker, *Casinonomics* (New York, NY: Springer, 2013), p. 155.

[298] See Douglas M. Walker, *The Economics of Casino Gambling* (New York, NY: Springer, 2007), chapter 8.

[299] These authors have been cited previously in this section. The Anielski reference is to the more comprehensive Canadian study, which provides a general framework that outlines almost any "cost" item imaginable: Anielski Management Inc. "The Socio-Economic Impact of Gambling (SEIG) Framework: An Assessment Framework for Canada: In Search of the Gold Standard" (Canada: Inter-Provincial Consortium for the Development of Methodology to Assess the Social and Economic Impact of Gambling, 2008). Available at www.anielski.com/Documents/SEIG%20Framework.pdf.

legalized gambling often endorse these studies that are more inclusive of cost categories. One explanation for this could be that these studies tend to produce relatively high social cost estimates.

The second perspective is the economic perspective that was first outlined in detail by Walker and Barnett (1999). Economists such as Eadington, Collins, Lapsley, Humphreys and a few researchers in other disciplines endorse this view. The key de facto difference between the economic perspective and the ad hoc approach on social costs is that the economic perspective does not include transfers of wealth in its conception of social cost. Among the social cost categories listed at the beginning of this section, the following would not be included as social costs under the economics definition: income lost from missed work, decreased productivity on the job, bailout costs, unrecovered loans to pathological gamblers, unpaid debts and bankruptcies, higher insurance premiums and abused dollars. These all represent transfers of wealth and do not cause a reduction of wealth in society. What is left – the different categories that would represent social costs under the economic conception – include: legal costs, treatment costs and "psychic costs" or anguish.

Critics of the economic perspective argue that ignoring transfers or other "internalized" costs is akin to sweeping under the rug key negative impacts from gambling disorder. Yet, if economic estimates include some transfers of wealth to be categorized as social costs, then why not simply include all losses at casinos (or revenues for casinos)? What is the fundamental difference? Allowing financial transfers to be considered as social costs in the field of gambling studies would corrupt the fundamental way in which we understand economics. For example, in other economic areas unrelated to gambling, economists could begin to consider home mortgages, car loans and philanthropic pledges as social costs.

Developing a basic definition of social costs is much more complicated than it seems at first blush. Nevertheless, even if there was a universal definition of social cost to which everyone subscribed, there are data and measurement issues that render social cost estimation an impossibly flawed endeavor. We address the data issues next.

5. Data Quality

Even if we could ignore the definitional issue discussed in the previous sub-section – or even if we agreed that it simply does not matter what the definition of "social cost" is and that our goal should be simply to measure all of the negative impacts of gambling disorder, the methodologies for measuring such costs are astonishingly primitive. Part of this is no fault of researchers, as some of the social costs are simply incalculable. However, other components of social cost that are, at least conceptually, measurable are done using a variety of surprisingly arbitrary assumptions.

a. Unmeasurable Social Costs

In this section, we discuss some of the social costs that defy monetary measurement, with the ultimate effect of either creating extreme variance in social cost estimates, or causing an

understatement in social cost estimates because the cost is ignored entirely. We again return to the list of social cost categories presented at the beginning of this section. Among those, the following costs defy monetary measurement: Depression and physical illness related to stress; increased suicide attempts; corruption of public officials; and divorce caused by gambling. In addition to these categories, we could add a general category of anguish on the part of the pathological gambler and relatives, friends or co-workers who are also impacted by the pathological gambler.

Psychologists have provided ample evidence that pathological gamblers engage in a variety of behaviors that are damaging to their personal and professional relationships and that cause financial hardship. We may very well be able to indicate a percentage of the general public that is likely to experience any particular type of problem. For example, perhaps 30 percent of pathological gamblers experience a divorce that is directly attributable to their gambling disorder. Attempting to put a monetary value on the experience of a divorce is a completely different matter.

Divorce can be considered to be a social cost of gambling disorder because it might not have otherwise happened in the absence of the gambling problem. Then the monetary resources used to execute the divorce (e.g., lawyers' fees, court costs, etc.) would be included in the social costs of gambling because these resources could otherwise have been used in other ways, were it not for the gambling disorder. These costs, which can easily be stated in monetary terms, are obviously relatively easy to handle in a social cost calculus.

In addition, however, according to the economics definition of social cost, the anguish or "psychic costs" associated with the divorce, on the part of the pathological gambler, the spouse, children and affected relatives and friends, could all be considered to be social costs of gambling. Yet, there is no practical way of creating a monetary estimate of these costs. Walker[300] notes that, "The value of psychic costs could be measured by asking individuals how much they would be willing to pay to avoid them. Surveys asking such questions would need to be very carefully constructed in order to be valid."[301] We are unaware of any such surveys having actually been performed in the social cost literature.

The same issues arise with other "intangible" costs associated with gambling disorder. It is important to note that the magnitude or severity of such costs may be extremely high, even in comparison to some of the social costs that are more easily measurable.

One could argue that we could simply multiply the measurable social costs by some factor (say, 2, for example) in order to account for the intangible social costs. But the resulting social cost estimate would be largely arbitrary and would not be particularly useful for informing a cost-benefit analysis on which policymakers are likely to rely in formulating gambling-related policy.

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[300] Douglas M. Walker, *Casinonomics* (New York, NY: Springer, 2013), p. 166.

[301] Among the potential problems with such a survey would be the possibility that respondents would not provide honest responses. In addition, respondents with different levels of income or wealth likely would give very different answers to questions such as this.

b. Other Measurement Problems

In the sub-section above, we discussed a critical problem with a variety of social costs of gambling that are intangible and are, therefore, not amenable to monetary measurement. Yet, even among the social costs that can be measured, there is a large degree of uncertainty in these measurements.

In some cases, researchers simply repeat a social cost figure from another source, without any attempt to confirm the quality of the methodology used or to determine whether the item should be included in the social cost measure at all. Most social cost studies fall into this category. For example, in Grinols' book, he provides a social cost estimate of $10,330 per gambling disorder per year. The estimate is based entirely on averaging other social cost estimates from the literature, few of which went through any rigorous peer-review process to ensure some basic level of quality, and none of which Grinols (apparently) reviewed critically.

A more dramatic example is the work by Kindt. [302] Kindt generally cites other social cost estimates, but the costs he cites are typically the largest that can be found in the literature ($53,000). However, it is unclear how seriously Kindt's work should be taken, given – as in his previously cited work – that he suggests that legalized gambling could undermine U.S. national security.

The comprehensive Canadian report by Anielski (2008) was an admirable attempt to develop a "gold standard" for the classification and measurement of social costs.[303] However, in a critique of the report written for the Canadian Gaming Association, Walker noted that the flexibility of the framework was also potentially detrimental because researchers could then insert their own biases into analyses in their decisions of what items to include or exclude from their analyses.[304] In addition, although the SEIG report's authors recognized measurement problems in socio-economic studies, the same measurement problems apply to their own framework.

To be sure, a "gold standard" for classifying and measuring social costs would be enormously beneficial in the literature, but will likely remain elusive. But consider one type of social cost, and the range of estimates for it. Grinols (2004) presents the monetary estimates for social costs from a variety of different studies. For "adjudication (criminal and civil justice costs)" there are the following monetary estimates for the social costs per pathological gambler:

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[302] For example, see John W. Kindt, "U.S. National Security and the Strategic Economic Base: The Business/Economic Impacts of the Legalization of Gambling Activities," *Saint Louis University Law Journal*, Volume 39, 1995, p. 567-584.

[303] Anielski Management Inc. "The Socio-Economic Impact of Gambling (SEIG) Framework: An Assessment Framework for Canada: In Search of the Gold Standard" (Canada: Inter-Provincial Consortium for the Development of Methodology to Assess the Social and Economic Impact of Gambling, 2008). Available at www.anielski.com/Documents/SEIG%20Framework.pdf.

[304] Douglas M. Walker, "Issues to Consider in Implementing the 'Socio-Economic Impact of Gambling (SEIG) Framework,'" Report prepared for the Canadian Gaming Association, August 2008.

Figure 108: Estimates of annual adjudication costs per disordered gambler

Jurisdiction	Estimated Social Cost
Maryland	$3,619
Wisconsin	$ 733
Connecticut	$ 568
South Dakota	$ 31
Louisiana	$ 420
South Carolina	$ 252
Nevada	$ 173

Source: Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004), p. 172-173.

It is conceptually possible that there are such starkly different costs in different states. However, it is also quite likely that each of the studies has measured this cost differently. The researchers were probably working with different data sources, and these may or may not have been reporting the same things. There is no indication that Grinols went to any effort to evaluate the quality or consistency of these different estimates.

The differences in cost estimates for this particular category is perhaps a justification for simply averaging the different cost estimates, as doing so would tend to minimize the impact of any outlier or particularly odd measurement methodology. Nevertheless, it remains the fact that there is no generally accepted way of measuring any particular social cost category.

Next, we turn to how a particular type of social cost was measured in one particular social cost study. This exercise is intended to show how arbitrary some social cost estimates are, due to the need to make a variety of arbitrary assumptions when estimating any particular cost type.

The 2003 Thompson and Schwer study cited by Grinols (2004) derived its cost estimates from a survey of 99 Gamblers Anonymous ("GA") members in Las Vegas. Among the different items in the survey, one issue addressed is "lost work time." As we noted previously, the idea here is that the pathological gamblers may skip work in order to gamble. Thompson and Schwer consider this to be a social cost since it does affect either the gambler, who loses income, or the employer, who pays the worker even though they did not work. (An economics definition of social cost would treat this as an internalized cost – the cost falls on either the employer or employee, and those two have a voluntary contract, so that there is no external, social aspect to the cost.)

The estimated cost for lost work time is based on the GA survey responses.[305] Among the 89 respondents for that particular question, 50 (or 56 percent) indicated they missed work because of gambling. They reported an average of 17.22 hours missed during each month, due to gambling. The average loss is 9.67 hours per month, allocated across the 89 respondents. This amounts to 116.1 hours per year (calculated, [(50 x 17.22)/89] x 12). The 116.1 hours is then multiplied by $15/hour, the hourly wage rate based on Thompson et al.'s 1996 study's use of an average annual

[305] The following discussion paraphrases the material reported on p. 11-12, of R. Keith Schwer, William N. Thompson and Daryl Nakamuro, "Beyond the Limits of Recreation: Social Costs of Gambling in Southern Nevada," paper presented at the 2003 Annual Meeting of the Far West and American Popular Culture Association, Las Vegas, NV, February 1, 2003. The paper was subsequently published in a journal in 2005 and is cited later in this report.

pay rate of $23,610. This then results in an estimated cost of $1,742 for lost work time, per pathological gambler, per year.

To Schwer and Thompson's credit, they have perhaps taken the most reasonable way possible, given their data, to estimate the value of lost work time. But it is clearly an arbitrary calculation. The criticism cited earlier from the National Research Council would seem to be particularly relevant: that Gamblers Anonymous members are unlikely to be representative of pathological gamblers, as a group. We would expect that the lost work hours by GA members should probably overstate the lost work hours for pathological gamblers in general.

In this section, we have briefly explored some of the potential problems with measuring social costs by considering one example of how a cost item is estimated based on GA survey responses. Clearly, researchers have done the best they can with the data available to them to provide estimates of social costs. But even with the best of intentions, it should be acknowledged that social cost estimation is extremely primitive and is largely arbitrary. Unfortunately, there simply is not a good source of objective data that can be used for the estimation of most types of social costs.

6. Comorbidity and Other Issues

Even if the definitional and measurement problems discussed above did not exist, there are several other issues that complicate social cost estimation. We briefly discuss some of these issues here.

a. Comorbidity

There is at least one problem with social cost studies that seems to be insurmountable and that renders social cost studies almost completely arbitrary (and certainly wrong). This is the problem of "comorbidity," or co-existing disorders.

Social cost studies typically estimate the social costs of gambling per pathological (or problem) gambler per year, assuming that all of the costs being measured are attributable to the gambling problem. Few, if any, studies acknowledge the problem of comorbidity. For example, Grinols[306] averages previous estimates to suggest that the social cost of gambling disorder (per pathological gambler per year) is $10,330. Yet if pathological gamblers have other behavioral disorders, certainly some of this $10,330 is attributable to problems other than gambling disorder. Yet, there is no adjustment made for this fact.[307] As another example, the Thompson, Gazel and Rickman study (1997, discussed previously) surveyed Gamblers Anonymous members and based

[306] Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004), p. 172-173.

[307] Grinols (2004, p. 173) does note that certain estimates "were adjusted by the author to correct for multi-causality according to Schwer et al. (2003) findings." Yet it is unclear what Grinols means by "multi-causality" and exactly what adjustment he is making.

their $9,469 social cost estimate on the survey responses from the GA members. However, the researchers did not do anything in their estimate to account for the fact that many of the GA members probably had other disorders. Walker cites some key studies on the issue, and we quote him:[308]

> The study by Petry, Stinson, and Grant[309] indicates the extent to which pathological gamblers exhibit other behavioral problems. They estimate that 73.2% of the U.S. pathological gamblers have an alcohol use disorder. The lifetime prevalence rate for drug use disorders among pathological gamblers is 38.1% and for nicotine dependence, 48.9%. Other comorbid conditions include mood disorders (49.6%), anxiety disorders (41.3%) and obsessive-compulsive personality disorder (28.5%) (Petry, Stinson and Grant, 2005, 569). The study by Westphal and Johnson[310] provides supporting evidence. Among their study subjects, 77% with a gambling problem had co-occurring behavior problems, and 56% had multiple problems.

To reiterate, if a pathological gambler has another disorder, such as alcoholism or a drug use disorder – or multiple co-occurring disorders – then it is likely that these other problems are at least partially responsible for the person's anti-social and socially costly behaviors. Yet most social cost studies do not adjust their cost estimates for this fact.

One cannot necessarily blame researchers for not making such an adjustment, as there would not seem to be any obvious objective way to do this. Indeed, we find no analysis in the literature that provides a good methodology for dealing with the comorbidity issue in estimating the social costs attributable to gambling disorder. Nevertheless, researchers should at least acknowledge the problem. Yet few researchers who have estimated social costs have acknowledged the comorbidity problem.

There is one study, however, that acknowledges and even attempts to address the comorbidity problem. The study by Thompson and Schwer[311] segments their sample of Gamblers Anonymous members into two groups (one that had no addictions other than gambling, and another including people who had multiple addictions).

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[308] Douglas M. Walker, *Casinonomics* (New York, NY: Springer, 2013), p. 180-181.

[309] Nancy M. Petry, Frederick S. Stinson, Bridget F. Grant, "Comorbidity of DSM-IV Pathological Gambling and Other Psychiatric Disorders: Results from the National Epidemiological Surveys on Alcohol and Related Conditions. *Journal of Clinical Psychiatry*, Volume 66, 2005, p. 564-574.

[310] James R. Westphal and Lera Joyce Johnson, "Multiple Co-occurring Behaviours Among Gamblers in Treatment: Implications and Assessment," *International Gambling Studies*, Volume 7, 2007, p. 73-99.

[311] William N. Thompson and R. Keith Schwer, "Beyond the Limits of Recreation: Social Costs of Gambling in Southern Nevada," *Journal of Public Budgeting, Accounting & Financial Management*, Volume 17, 2005, p. 62-93.

Gamblers Anonymous members into two groups (one that had no addictions other than gambling, and another including people who had multiple addictions).

For the entire group of 93 survey respondents, the average estimated social cost was $19,711. But when the group was separated by the number of addictions, 54 had other addictions, and 39 did not. The estimated social cost for those with only the gambling problem was $17,056, while the mean estimated costs for individuals with multiple disorders was $20,962.[312] Thus, Thompson and Schwer conclude that the costs for pathological gamblers without coexisting disorders is about 81 percent of the cost of those who have multiple disorders. Yet even after suggesting the cost difference, the researchers suggest that additional costs attributable to the other disorders may be overstated. They argue that this is because gambling costs more as an activity than drugs, alcohol, tobacco or other addictions.[313] While this may be true, from an economic perspective, the social costs of gambling generally aren't based on the amount of losses per se. Rather, the social costs are based on the wealth lost to society, such as from enforcement and treatment – resources that must be used in certain ways because of the existence of gambling disorder and are therefore diverted from other types of production. For this reason, we are skeptical of Thompson and Schwer's attempt to deal with the comorbidity problem. Nevertheless, these authors should be given credit for acknowledging the problem and attempting to adjust their cost estimate accordingly. In the end, we believe their estimate is still problematic because the authors ask Gamblers Anonymous members to answer the survey with costs that they attributed solely to their gambling problem. It is unclear whether people with a serious gambling problem are likely to be able to do this objectively, especially when studies have found that such individuals cannot even estimate the amount of their gambling losses accurately.[314]

Even if researchers did have a way of allocating the social costs of pathological gamblers' behavior to each person's various behavioral disorders, another study suggests an even further complication. The report by Kessler et al.[315] indicates that other comorbid disorders – other than gambling disorder – *usually precede the onset of gambling disorder*. Specifically, among "mood disorders," "anxiety disorders," "impulse-control disorders" and "substance abuse disorders," only nicotine dependence was preceded by gambling disorder in over 50 percent of their sample

[312] William N. Thompson and R. Keith Schwer, "Beyond the Limits of Recreation: Social Costs of Gambling in Southern Nevada," *Journal of Public Budgeting, Accounting & Financial Management*, Volume 17, 2005, p. 85-86.

[313] Ibid., p. 86.

[314] For example, see A. Blaszczynski, R. Ladouceur, A. Goulet and C. Savard, "'How Much Do You Spend Gambling?': Ambiguities in Questionnaire Items Assessing Expenditure," *International Gambling Studies*, Volume 6, 2006, p. 127.

[315] R.C. Kessler, I. Hwang, R. LaBrie, M. Petukhova, N.A. Sampson, K.C. Winters and H.J. Shaffer, "DSM-IV Pathological Gambling in the National Comorbidity Survey Replication," *Psychological Medicine*, Volume 38, 2008, p. 1351-1360.

group.[316] The fact that gambling disorder usually is preceded by another problem may indicate that, as a secondary disorder, the gambling disorder may not be the primary catalyst for socially costly behaviors exhibited by pathological gamblers.[317]

In any case, there is no methodologically sound way to partition social costs among the different co-existing disorders of pathological gamblers. This problem may be the single greatest hurdle to researchers developing valid social cost of gambling estimates.

b. Surveys

As noted previously, some social cost estimates are based on surveys of pathological gamblers or of Gamblers Anonymous members. Another potential problem with social cost estimates, generally, is that we should not necessarily be confident that the GA members or pathological gamblers, in general, fill out such surveys with accurate information. They may wish to understate or overstate the problems that they associate with gambling. Perhaps on average, these two effects average out, but we simply do not know.

More generally, we should be skeptical of any social cost estimates that are based on survey respondents' claims about how much they have lost gambling.[318] When pathological gamblers are asked to estimate financial effects of gambling, such as the amount they lost gambling, research has shown that they are not very good at doing this:

> Without specific instructions regarding how gambling expenditures are to be calculated, participants use different strategies. Different strategies used lead to variations in the expenditures reported and, therefore, cast doubt on the validity of the data and raise questions that there may be potential serious biases regarding gambling expenditures currently reported in the gambling literature.[319]

c. Counterfactual Scenario

Another problem with social cost estimates is that such research typically does not account for the "counterfactual scenario," or what would have otherwise happened. In other words, a social cost of gambling estimate of $9,469 per pathological gambler per year, based on a survey of GA

[316] Ibid, p. 1357, Table 2.

[317] Obviously, this statement is speculative, but this is an area that deserves more attention by researchers.

[318] This issue may be particularly relevant for categories such as "abused dollars," which appear to be largely based on the amount lost gambling.

[319] A. Blaszczynski, R. Ladouceur, A. Goulet and C. Savard, "'How Much Do You Spend Gambling?': Ambiguities in Questionnaire Items Assessing Expenditure," *International Gambling Studies*, Volume 6, 2006, p. 127.

members may implicitly assume that in the absence of legal gambling, such costs would not exist. Yet, this is clearly not the case.

A key policy question for Florida might be, "What is the marginal impact on social costs of the legalization of commercial casinos?" In the case of Florida, there is already legal gambling in various forms. If policymakers are interested in the social costs of gambling, the relevant costs are those marginal costs due to the expansion of gambling, not the absolute costs of gambling disorder. Given there are already gambling opportunities in Florida, there is already some number of pathological gamblers in Florida. If several standalone casinos are built and existing pari-mutuels are allowed to add slot machines, then the availability of various types of gambling obviously increases. But it would be inappropriate to then measure the social costs of gambling and then suggest (implicitly or explicitly) that this is the potential cost of a policy change of casino expansion in Florida.

We are unaware of any social cost estimate that has taken this issue into account. This suggests, then, that social cost estimates in the literature cannot generally be applied to estimate the social costs that are likely to result from a particular policy change. Rather, the social cost estimates in the literature reflect, instead, the social costs of gambling compared to a counterfactual in which there is *no gambling disorder*. Yet this is clearly not the situation, as even in the absence of legal gambling options, some people still gamble illegally or travel elsewhere to gamble legally, and there is still likely some level of gambling disorder.

In previous studies that Spectrum has performed in other states, we note that states that did not offer casino gambling at the time of our study – such as Massachusetts – still had significant numbers of adults with gambling disorders. In such instances, states that do not have casinos that provide funding for gambling treatment could be left with a funding deficit, while other states that have casinos and were hosting gamblers from other states had the reverse: They collected the gambling revenues but were under no obligation to provide treatment or funding for gamblers who lived in other states.

For Florida then, if we are interested in estimating the social costs that are likely to result from any particular policy change, it suggests that the relevant estimate should be the estimated social costs that would exist after the policy goes into effect (say, new casinos are built and slot machines are added at existing pari-mutuels) minus the social costs of gambling currently, with the current status of legal/illegal gambling in the state. The marginal social costs due to a particular policy change then depend largely upon how one views the relationship between the prevalence of problem gambling and the expansion of legal gambling options in a jurisdiction. We discuss this issue next.

d. Degree of Gambling Expansion and Social Cost Estimates

Psychologists have estimated the prevalence of gambling disorder in a variety of jurisdictions and over a wide variety of time periods. Recent estimates suggest that the past-year

prevalence rate of pathological/problem gambling ranges from 0.15 percent to 4.7 percent in the general adult population,[320] with lifetime prevalence established at between 0.4 percent and 2.0 percent.[321] This rate is observed to have remained relatively stable despite the dramatic proliferation of casinos within the United States.[322, 323] This suggests there is not a direct, or at least linear, relationship between gambling availability and the prevalence of gambling disorders. We discuss several studies that have focused on this issue in particular.

As we mentioned earlier in the section on gambling exposure, the paper by Shaffer, LaBrie and LaPlante[324] develops a "regional exposure model" ("REM") to examine the relationship between gambling availability and gambling disorder. Regional exposure considers dose, potency and duration of gambling availability. The researchers also devised a Regional Index of Gambling Exposure ("RIGE"), which standardizes available data on dose, potency and duration of gambling availability as scores, and then combines the scores to yield a standardized scale score of regional gambling availability The purpose of the RIGE is to allow for the ordering of jurisdictions along a continuous gradient and test assumptions about correlations between regional gambling availability and prevalence of pathological/problem gambling.[325]

The Shaffer et al. analysis of county-level data for the state of Nevada reveals that, when comparing counties with higher RIGE scores to those with lower scores as groups, the prevalence of pathological and problem gambling is higher in counties with higher RIGE scores.[326] The researchers note, "Individuals who already have problems might be attracted to the gambling-exposed areas" (p. 45), among other potential complications with the analysis. Nevertheless, their

[320] Stephanie Stuckie and Margret Rihs-Middel, "Prevalence of Adult Problem and Pathological Gambling between 2000 and 2005: An Update," *Journal of Gambling Studies*, Volume 23, 2008, p. 245-257.

[321] Nancy M. Petry, Frederick S. Stinson, Bridget F. Grant, "Comorbidity of DSM-IV Pathological Gambling and Other Psychiatric Disorders: Results from the National Epidemiological Surveys on Alcohol and Related Conditions," *Journal of Clinical Psychiatry*, Volume 66, 2005, p. 564-574.

[322] Donald W. Black, Brett McCormick, Mary E. Losch, Martha Shaw, Gene Lutz and Jeff Allen, "Prevalence of Problem Gambling in Iowa: Revisiting Shaffer's Adaptation Hypothesis," *Annals of Clinical Psychiatry,* Volume 24, 2012, 279-284.

[323] Robert J. Williams, Rachel A. Volberg, and Rhys M.G. Stevens, The Population Prevalence of Problem Gambling: Methodological Influences, Standardized Rates, Jurisdictional Differences, and Worldwide Trends. Guelph, Ontario, Canada: Ontario Problem Gambling Research Centre and Ontario Ministry of Health and Long Term Care.

[324] Howard J. Shaffer, Richard A. LaBrie and Debi LaPlante, "Laying the Foundation for Quantifying Regional Exposure to Social Phenomena: Considering the Case of Legalized Gambling as a Public Health Toxin," *Psychology of Addictive Behaviors*, Volume 18, 2004, p. 40-48.

[325] Ibid., p. 43.

[326] Ibid., p. 45.

analysis suggests there is some relationship between the availability of legal gambling and problem/gambling disorder at a county level.

Another contribution of this paper is that it discusses a "social adaptation model," which suggests that the novelty of new gambling opportunities might temporarily increase gambling and gambling problems, but that people adapt to the change and gambling and problem gambling eventually decline toward a more stable base level.[327]

We also have mentioned Welte et al.[328] earlier. This research examined various demographic, ecological and social-risk factors that might potentially explain problem gambling prevalence. They found that, for people more than 30 years old, risk for the number of casinos available within 10 miles positively predicted the presence of a gambling problem. However, there was no such relationship for people under 30 years old. Of importance, the authors noted that the non-significant relationship between casino proximity and problem gambling for individuals under 30 was not explained by a more restricted set of potential opportunities for casino wagering amongst younger individuals or enforcement of legal age limits. Analyses revealed that proximity to casinos similarly had no relationship to the gambling problems of respondents aged 21-29 or respondents aged 18-20.[329]

Finally, the study by Sévigny et al. suggests that the geographical proximity of casinos is positively related to casino gambling participation and expenditure, but does not affect the past-year prevalence rate of probable gambling disorder or problem gambling. However, results from this study should be interpreted with caution. It remains unclear whether the non-significant relationship between casino proximity and gambling problems for this sample is an artifact of respondents' gambling activity preferences (i.e., casino games may not be the main or only gambling activity for individuals with gambling problems in the study's sample).[330]

Of course, there are other studies that have examined the relationship between casino proximity (or gambling availability) and the prevalence of disordered gambling. Different studies suggest different conclusions, and it is not obvious that there is a direct, linear relationship between gambling availability and the prevalence of gambling problems.

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[327] Howard J. Shaffer, Richard A. LaBrie and Debi LaPlante, "Laying the Foundation for Quantifying Regional Exposure to Social Phenomena: Considering the Case of Legalized Gambling as a Public Health Toxin," *Psychology of Addictive Behaviors*, Volume 18, 2004, p. 42.

[328] John W. Welte, Grace M. Barnes, William F. Wieczorek, Marie-Cecile O. Tidwell and Joseph H. Hoffman, "Types of Gambling and Availability as Risk Factors for Problem Gambling: A Tobit Regression Analysis by Age and Gender," *International Gambling Studies*, Volume 7, 2007, p. 183-198.

[329] Ibid., p. 193.

[330] Serge Sévigny, Robert Ladouceur, Christian Jacques and Michael Cantionotti, "Links Between Casino Proximity and Gambling Participation, Expenditure, and Pathology," *Psychology of Addictive Behaviors*, Volume 22, 2008, p. 295-301.

In the case of Florida, which currently has several casinos and pari-mutuel gambling throughout the state, it is unclear how exactly an expansion of gambling availability would affect the prevalence of problem gambling and gambling disorder. Based on our review of the literature, it is possible that new gambling venues would be related to a temporary increase in prevalence, however, if the new gambling venues were to be in areas that already have existing gambling venues, then the effect could be minimal.

There is no scientific mechanism for estimating how the prevalence of gambling problems is likely to change as a result of potential policy changes. Yet we could posit a change in the prevalence rate of gambling disorder if we wish to consider how cost estimates would vary based on prevalence rate changes. We will address this issue later in this section of the report.

e. Cause of Gambling Problems: Gambling Availability or Mental Illness?

While trying to determine the likely impacts of expanded gambling opportunities on the prevalence of gambling disorder, and in turn, on the estimated social costs of gambling related to expanded gambling opportunities, one must consider the relationship between gambling and gambling problems. Why do people develop gambling problems? Is it fundamentally because of an increase in the availability of gambling or the types of gambling available? Or is it more based on the fact that gambling problems are a symptom of a more fundamental mental illness? In other words, do gambling machines make people addicted, or is gambling addiction a symptom of some more basic mental illness? The answer to this question, which is still under debate in the scientific literature, would have a large impact on how much we should expect the expansion of legal gambling options in Florida to affect the prevalence of gambling disorder and related disorders.

Although we do not have a concrete answer to this question, the social adaptation model discussed above suggests that this issue may not have a large long-term impact on our analysis.

7. Gross versus Net Social Costs

Most studies that address the social costs of gambling disorder only focus on the cost side of the ledger. Similarly, economic studies that address the employment or tax impacts of legalized casino gambling often do not consider the costs of gambling. In this section, we briefly discuss some of the potential social benefits of expanded casino gambling. In many cases, these benefits are not acknowledged or measured by researchers seeking to inform the debate over cost-side of casino expansion.

The benefits of legalized casinos that are usually acknowledged by researchers and politicians have to do with employment. When a new casino is built, it generates temporary construction jobs. Then the operation of the casino is obviously labor-intensive; casinos typically have a large number of employees. Along with the jobs, it should be noted, come other benefits for the workers. For example, if casinos provide health insurance, then this would represent a significant social benefit. This is because the insurance would help enable the employee and his/her family to afford more and better health care, which has obvious benefits to society.

Expanded gambling has other potentially beneficial impacts for a local economy. For example, the increased demand for employees in the labor market, caused by the opening of a casino, would tend to put upward pressure on wages in the local economy. While this would benefit workers in the area, it also could put upward pressure on prices, which would negate some of the benefit of the higher wages.

Among the other benefits from gambling expansion would be the consumer benefits that accrue to those who enjoy gambling. When consumers receive a new entertainment option, it improves their well-being. More competition among entertainment firms also may push prices down and quality higher, which also benefits consumers.

These are just some of the potential social/economic benefits of the expanded gambling industry. These benefits would offset some of the social and economic costs of gambling disorder. Yet some of these impacts are rarely considered in the literature. Indeed, it is rare to find a single study that simultaneously considers both the cost- and benefit-side of the ledger. For this reason, little is known about the *net social costs* of gambling disorder. After considering the social benefits that may be attributable to legalized gambling, these costs may be lower than implied in social cost studies from the literature.

Despite the lack of data, some authors have speculated on the net impact (social and economic) of legalized gambling and casinos, in particular. For example, Grinols claims that the "costs of problem and gambling disorder versus the benefits of casino expansion…range from 3.9:1 to 6.3:1."[331] Yet, Walker has argued that Grinols' figure is flawed because he discounts consumer benefits from casino expansion and overstates the social costs of gambling.[332] Walker argues that the casinos probably generate more social and economic benefits than costs, although he acknowledges not all of these can be precisely (or even generally) measured.[333] One can, of course, find other opinions on the matter.

One thing that should be easy to agree on is that no one knows for certain the net social and economic costs and benefits of legalized gambling. It is, therefore, an enormous challenge to attempt to estimate the marginal impact of the expansion of casino or other forms of gambling. Yet we attempt to provide a range of reasonable estimates in the next section.

8. Social Costs: An Economic Illustration

In this section, we will discuss monetary estimates of the social costs of gambling disorder in more detail and offer an estimated range of social costs of gambling that might apply to Florida. It should be noted at the outset that we are not collecting primary data; in fulfillment of Florida's

[331] Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004), p. 178.

[332] See Douglas M. Walker, *Casinonomics* (New York, NY: Springer, 2013), p. 23, 180.

[333] Douglas M. Walker, *Casinonomics* (New York, NY: Springer, 2013), p. 2, 261.

request, we will be discussing estimates that have already been published in the literature. The reason we do not attempt to develop an original social cost estimate for this study is that there are fundamental problems with this line of research that, in our opinion, renders such estimates speculative and largely arbitrary.[334]

Among the studies from which cost estimates were listed earlier in this section, the social cost of gambling disorder estimates ranged from $9,469 to $53,000 per pathological gambler per year. Yet among these, in our judgment, Thompson, Gazel and Rickman (1997) and Thompson and Schwer (2005) do the best job in explaining how their cost estimate was calculated. Both studies rely on survey responses from Gamblers Anonymous members and, therefore, probably overstate the actual social costs of the average pathological gambler, as discussed above. There is also some reason to believe that GA members in Las Vegas might have relatively serious gambling problems, say compared to Wisconsin GA members (from the 1997 study). We therefore choose to focus on the Thompson, Gazel and Rickman study as a starting point for developing a range of social cost estimates.[335] We recognize that this study provides one of the lowest social cost studies in the literature. However, we view the transparency of this study, relative to most others, to be critical in being able to suggest a reasonable social cost range to be applied to Florida.

Below we again reproduce the summary table from the Thompson et al. paper, which shows the different components they include in their social cost estimate of $9,469 per pathological gambler per year. In the sections below, we discuss the economic perspective on social costs, and how the Thompson et al. estimate would be adjusted, to account for the economic perspective. We also examine the issues of wealth transfers and externalities. Finally, we provide a range of social cost estimates for Florida based on these various considerations.

[334] The most obvious problem, discussed above, is how to deal with the comorbidity problem.

[335] William N. Thompson, Ricardo C. Gazel and Dan Rickman, "Social and legal costs of compulsive gambling," *Gaming Law Review*, Volume 1, 1997, p. 81-89.

Figure 109: Estimated annual Florida social costs of gambling, per disordered gambler

Employment		**$2,941**
Lost work hours	$1,329	
Unemployment compensation	214	
Lost productivity/unemployment	1,398	
Bad debts		**1,487**
Civil court		**848**
Bankruptcy court	334	
Other civil court	514	
Criminal justice		**3,498**
Thefts	1,733	
Arrests	48	
Trials	369	
Probation	186	
Incarceration	1,162	
Therapy		**361**
Welfare		**334**
Aid to Dependent Children	233	
Food stamps	101	
Total		***$9,469***

Source: Thompson, et al., 1997, p. 87.

a. The Economic Perspective

As explained above, economists have a particular way of defining "social cost." This definition was first explained in the context of gambling by Walker and Barnett in 1999.[336] The social cost of an action was defined in that paper as "the amount by which that action reduces aggregate societal real wealth" (p. 185). This definition was discussed in more detail in a previous section. Basically, from an economic perspective, social cost does not include transfers of wealth (i.e., amounts that are simply transferred from one person or group to another) or costs that are "internalized" (i.e., are borne by the pathological gambler him-/herself, or someone with whom that person has a voluntary financial relationship). The economic definition of social cost also makes a distinction between types of "externalities." Externalities are third-party effects and, generally, what many observers have in mind when they think of "social cost." We will discuss externalities in more detail below.

We can compare the economic perspective on social cost with one other definition of social cost, already discussed earlier. The paper by Thompson, Gazel and Rickman offered a social cost definition, apparently in reaction to the conference paper by Walker and Barnett, which was subsequently published in 1999. In their 1999 paper, Thompson et al. define social cost as:

> costs that the gambler imposes upon people who are not participating in the gambling process as a result of his or her gambling and gambling related activities. The social costs of gambling are burdens that the gambler imposes on others. Others would not have these

[336] Douglas M. Walker and A.H. Barnett, "The Social Costs of Gambling: An Economic Perspective," *Journal of Gambling Studies*, Volume 15, 1999, p. 181-212.

burdens if the individual were not participating in gambling activities. (p. 3; emphasis in original)

From this definition, and from the items measured and included in their social cost estimates in various studies[337] we can infer that these researchers believe that social costs can and should include transfers of wealth as well as pecuniary externalities. We will discuss how the different perspectives on social cost treat different items in the following sections.

We begin with the Thompson et al. (1997) social cost estimate of $9,469. We consider how an economics definition of social cost would affect their cost estimate. For this discussion, we reproduce Walker and Barnett's analysis (1999, p. 198-202), which basically follows the table of costs listed by Thompson et al.

The first item is the value of lost work hours, unemployment compensation and lost productivity/unemployment. Unemployment compensation is a government program that transfers wealth from taxpayers to benefits recipients and, hence, it is a transfer of wealth that would not be included as a social cost of gambling from an economic perspective. The lost work time and associated payment would not be a social cost, as the worker ultimately loses this money. Not getting paid for not working should not be considered a social cost, as it simply represents a transaction for labor that does not occur. The final subcategory under "Employment" is lost productivity. To the extent that the employer pays the worker for work that is not done or for hours during which the worker is less productive than normal, then the employer bears this cost. Because the labor contract is between these two people (the employee and employer), any costs imposed by one on the other are borne by actors to the transaction. Therefore, there is no "social" aspect to this cost. If the employer does not fire the employee for reduced productivity, then it is the employer who bears the cost – and this is a voluntary transaction between the two. Then the $2,941 for lost work productivity would not be considered a social cost from an economic perspective.

The next group of items is "bad debts," or amounts of money pathological gamblers borrowed but did not pay back. Although this is certainly bad for creditors, it is offset by the gain to the debtor. Thus, bad debts are a wealth transfer from an economic perspective and do not belong in social cost estimates. The $1,487 would therefore be deducted from the Thompson et al. social cost estimate.[338]

Both types of civil court costs would represent social costs of gambling disorder, so that their estimated combined value of $848 would be a social cost. Under the heading of "criminal justice," all of the items except "thefts" would be included in social costs, from an economic perspective. This includes arrests, trials, probation and incarceration. The total amount for these is

[337] Thompson et al. (1997, 1999) and Thompson and Schwer (2005) are examples.

[338] Walker and Barnett (1999, p. 200) do note that the resources used in an attempt to collect bad debts would be considered a social cost, since these represent resources that cannot then be used for other means of production in society.

$1,765. Theft is not included because it is a wealth transfer, and the money stolen does not cease to exist.

Therapy for pathological gamblers, which Thompson et al. value at $361, would be considered a social cost because, in the absence of gambling disorder, the therapy would presumably not be needed and because the resources now cannot be used to produce something else instead.

The welfare costs both represent wealth transfers and, thus, should be excluded from the social cost estimate. Aside from this, one could argue that these costs are costs of government policy, in general, not of gambling disorder, in particular. In addition, it would also need to be shown that these expenses would not be incurred in the absence of the gambling problem.

When we total up the costs that remain under an economics conception of social cost, we have a total of $2,974 per disordered gambler annually. Yet this number is itself certainly flawed, for several reasons that also apply to the original Thompson et al. social cost estimate:

- It assumes the Gamblers Anonymous members have no co-existing disorders (i.e., there is no comorbidity) that should be attributed some of the measured social costs.
- It assumes that the GA members correctly and honestly completed the survey instrument.
- It fails to consider a number of social costs that exist, but that are unmeasurable, such as divorce, suicide attempts and other negative social impacts.
- It assumes that GA members are representative of pathological gamblers, in general.

Despite these problems, as noted earlier, the Thompson et al. social cost estimate is probably the best from which to start because it is at least transparent in what is being measured, and how. Most other studies are not nearly so clear in this regard. Returning again to the study by Thompson and Schwer (2005), we note that similar adjustments for internalized costs and transfers would reduce the social cost estimate for Las Vegas pathological gamblers from $19,711 to about $1,579 per pathological gambler per year.[339]

We will use the adjusted social cost estimate of $2,974 (from Walker and Barnett, 1999) as a base social cost estimate for the application to Florida.

b. Including Transfers

As has been noted before, there has been a lot of debate in the literature over the proper treatment of wealth transfers in social cost analyses. Most researchers seem to agree with Walker

[339] Douglas M. Walker, "Clarification of the Social Costs of Gambling," *Journal of Public Budgeting, Accounting & Financial Management*, Volume 20, 2008, p. 147.

and Barnett, that transfers should not be included as social cost estimates.[340] However, if we ignore the economists on this issue and decide to include wealth transfers in social cost estimates, then our social cost estimate would increase by $3,768 and become $6,742, based on the estimated impacts by Thompson et al. (1997). In particular, we would include in the estimate these additional items: bad debts, unemployment compensation, thefts and welfare (Aid to Dependent Children and food stamps).

Again, we should mention the objections economists have to including transfers of wealth. If these are included, then ordinary transactions could just as well be included in social cost estimates. For example, Politzer, Morrow and Leavey's (1985) concept of "abused dollars," which could be interpreted as the amount of money bet gambling, could be included in social cost estimates, since it represents money put at risk. However, we believe the concept of social cost quickly loses its value once wealth transfers are included in the estimation.

c. Accounting for Externalities

The concept of "externalities" comes from the public economics literature. Basically, an externality is a third-party effect of an act or transaction. For example, if a person smokes a cigarette in a restaurant and the smoke bothers other patrons in the restaurant, the smoker is creating a negative consumption externality. A factory that produces cars is engaged in a private market transaction with car buyers. Yet, if the factory emits air pollution and the smoke damages neighbors of the factory who happen to be down-wind, then economists call this a negative production externality. In both examples, the parties to the transaction (restaurant owner and smoking patron; car buyer and car factory owner) fail to consider the costs that their action or transaction imposes on others in society.

These third-party effects are externalities and their monetary value, if it can be estimated, represents a real cost to society. If the other patrons in the restaurant would be willing to pay a total of $50 if they could avoid the cigarette smoke during the meal, then this amount would represent the cost of the smoking externality. If the factory smoke causes the factory's neighbors to have to redo their laundry to get it as clean as it would have been in the absence of the factory pollution, at a total cost of $500, then this would be the social cost of that externality.

What complicates the issue of externalities is that there is one type of externalities that represents a social cost, but there is another type that does not represent a social cost. For example, in the car factory and laundry example above, that does represent a social cost because the neighbors had to use real resources (i.e., soap, water, laundry machines) in order to re-clean their laundry. Those were resources that could have otherwise been used for other purposes (i.e., to clean additional laundry, rather than re-cleaning laundry), so it represents real resources that are

[340] Sources cited earlier that do not view transfers as social costs include: National Research Council, Federal Reserve Bank of Minneapolis, and researchers including Eadington, Collins & Lapsley, and Single.

lost to society. Perhaps the best discussion of this rather technical issue is by Baumol and Oates (1988).[341]

Another type of externality is called a "pecuniary externality." These are also third-party effects, but they tend to affect wealth distribution, say through price adjustments, rather than the real resources available in society. For example, when a new casino opens in a small city, it causes an increase in demand in the local labor market. This pushes the wage rate higher. Then other firms in the city must offer their workers higher wages in order to compete with the casino for workers.[342] The higher labor expenses for other firms in the city are certainly costs to those firms that resulted from the opening of the casino. But it only affects labor prices; it does not cause other firms to need to hire more labor, for example, to produce a given amount of product. Even if the higher labor prices push some local firms out of business, it is still considered a pecuniary externality. Externalities that occur only through price adjustments are generally not seen by economists as being particularly important – they are a basic fact in market economics. All sorts of individuals' actions (on both the supply and demand side of the market) can affect prices. But this does not mean that we should be worried about all such transactions, or that government should be recruited to correct such externalities.

d. Including Internalized Costs

The last category of items included in the Thompson et al. (1997) social cost estimate are costs due to gambling disorder but that are incurred by either the pathological gambler himself/herself or someone else who has entered into a private transaction with the pathological gambler. Examples of such costs that are "internalized" would include bad debts and possibly therapy (if the pathological gambler pays for therapy). The other one would be the employment costs identified by Thompson et al.

Lost work hours and lost productivity would both be costs that are borne either by the employer or employee and, therefore, are not social costs. If the employee does not get paid for lost work hours and if the employer cuts pay due to poor performance or productivity, then the pathological gambler bears this cost. If the employer does not cut pay, then the employer bears the cost – voluntarily by continuing to employ the pathological gambler who is not performing up to expectations.

[341] William J. Baumol and Wallace E. Oates, *The Theory of Environmental Policy*, 2nd edition (New York, NY: Cambridge University Press, 1988), chapter 3, and especially p. 30. Walker (*Casinonomics*, 2013, p. 159-161) presents their analysis in less technical terms.

[342] In the example, we are assuming no (or minimal) unemployment. The more unemployment there is, and the more of these people hired by the casino, the opening a casino would reduce pressure on demand and wages.

Unemployment compensation would be treated similar to the "Welfare" items of Aid to Dependent Children and food stamps. These are government programs and may be better classified as costs of government policies, rather than the social costs of gambling.[343]

If we were to include costs that are internalized by either the pathological gambler or parties who voluntarily agreed to enter into a transaction with him/her, then we would add $2,727 to the social cost estimate (lost work hours plus lost productivity/unemployment). Our new total would be $9,468, the amount originally estimated by Thompson et al. (1997).

Finally, it is worth noting that we could also consider "bad debts" to be an internalized cost. Yet, it is also a simple wealth transfer, as discussed above. So bad debts could be included in either category.

e. Estimate for Problem Gamblers

The Thompson et al. (1997) social cost estimate was based on individuals who were members of Gamblers Anonymous, and may therefore be expected to have relatively serious gambling problems. It is safe to assume that most of the individuals would qualify as pathological gamblers. A less serious category of gambling problem is called "problem gambler."

One of the diagnostic tools for gambling problems is the American Psychiatric Association's *DSM-IV*, which recently has been updated to *DSM-V*. This is discussed elsewhere in this report. There are 10 *DSM-IV* criteria that are used to classify people with a gambling-related disorder. Problem gamblers would satisfy three to four or fewer criteria from the DSM-IV, while pathological gamblers would be characterized by five or more DSM-IV criteria.[344]

Since the Thompson paper offered only an estimate for "compulsive gamblers," which we are assuming were pathological gamblers, we also need a cost estimate for problem gamblers. We would, of course, expect the social costs attributable to problem gamblers to be less serious than for pathological gamblers. Ideally, Thompson et al. would have segmented their sample into problem gamblers and pathological gamblers. Since that was not done, we must produce a social cost estimate for problem gambling in another way. Although the studies Grinols cites have a variety of problems, the advantage of looking to Grinols in this case is that he does survey several different studies, some of which estimate costs for problem gamblers. Rather than re-estimating our cost using one of those other studies from Grinols' survey, we opt to take the average social cost estimate for problem gamblers as a proportion of the estimate for pathological gamblers. Grinols notes that the average social cost for problem gamblers was $2,945, while it was $10,330

[343] Browning (1999) calls such government programs "fiscal externalities." These do not produce economic inefficiencies (or social costs). See Edgar K. Browning, "The Myth of Fiscal Externalities," *Public Finance Review*, Volume 27, 1999, p. 3-18.

[344] Two other categories are specified. "At-risk" gamblers endorse 1-2 DSM criteria. "Low-risk" individuals endorse none of the DSM criteria.

for pathological gamblers. Then his estimated cost for problem gamblers is about 30 percent of the cost of pathological gamblers. We use this proportion to derive our social cost estimates for problem gambling.[345]

f. Summary of Social Cost Estimates

We can now summarize the per-person *annual* estimated social costs, based on our different social cost definitions, and by adjusting the gambling disorder estimate to produce the problem gambling estimate. Recall that we had three different estimates for the social costs of gambling disorder. The basic economics estimate of social costs would be $2,974. If we add transfers of wealth to the estimate, it becomes $6,742. If we include costs that are internalized, then the estimate becomes the $9,469 estimated by Thompson et al. (1997). In order to get the estimated costs for problem gamblers, we multiply each of the above numbers by 30 percent. The different definitions and associated social cost estimates are summarized in the table below. For reasons discussed earlier, we believe the estimates based on the economics definition of social cost are the most accurate among the estimates considered here. We have highlighted those data in the table.

Figure 110: Estimated social costs, per disordered/problem gambler, per year

Social Cost Definition	Pathological Gambler	Problem Gambler
Economics (excludes transfers and internalized costs)	$2,974	$ 892
Economics definition, plus transfers	$6,742	$2,023
Economics definition, plus transfers and internalized costs	$9,469	$2,840

Source: Spectrum Gaming Group summary

g. A Range of Gross Social Cost Estimates for Florida

Next, we use these estimated values to develop total gross social cost estimates (i.e., estimates that do not consider benefits) for Florida. Our base social cost estimate comes from an economics definition of social cost, using the numbers provided by the Thompson et al. study. We can make adjustments to it based on how we wish to define "social cost" or, more to the point, depending on what types of impacts we wish to include in the estimate.

We have one final distinction to make before presenting the various estimates. Psychologists have found that the prevalence of problem and pathological gambling varies, depending on how far back one looks at symptoms. For example, those who report their symptoms of pathological gambling occurred during the past year are called "past-year problem gamblers."

[345] This is clearly not an ideal way of deriving the cost estimate for problem gamblers. But if we wish to keep using the Thompson et al. (1997) social cost estimates, then we must adapt problem gambling cost to that study.

Those who report the symptoms have occurred sometime during their life but not necessarily only in the past year are called "lifetime pathological gamblers."

A study of Florida estimated the prevalence rates listed in the table below.[346] We have highlighted the categories that are assumed to be the source of many of the social costs of gambling (problem and pathological gamblers). The different categories are based on how many of the 10 DSM-IV categories are endorsed by the individual.

Figure 111: Past-year and lifetime Florida prevalence rates

Past-Year	% of General Population
Low-risk (no criteria)	66.0%
At-risk (1-2 criteria)	4.0%
Problem (3-4 criteria)	0.5%
Pathological (5+ criteria)	0.3%
Lifetime	**% of General Population**
Low-risk (no criteria)	82.2%
At-risk (1-2 criteria)	6.9%
Problem (3-4 criteria)	0.5%
Pathological (5+ criteria)	0.5%

Source: Shapira, et al. (2002)

We will use these prevalence estimates to provide a variety of social cost estimates for Florida. It should be noted that the expansion of legal gambling options in the state might be expected to cause a modest and temporary increase in prevalence rates. However, these would be expected to fall back in line with the rates listed above, after some time. This expectation is based on the social adaptation model.[347] We therefore assume that the prevalence rates would remain roughly the same even with expanded legalized gambling in Florida.

The Census Bureau[348] estimates the 2012 population of Florida at 19,317,568. We use this figure, along with the prevalence rates in the table above and the different social cost estimates, to provide a range of cost estimates for Florida.

For each gambling disorder category (i.e., problem gambling and pathological gambling), we provide a gross social cost estimate for each of the three definitions of social cost discussed earlier (i.e., economics definition; add wealth transfers; add internalized costs), given the 2012 population of Florida. We provide the cost table twice, once for past-year prevalence estimates

[346] Nathan A. Shapira, Mary Ann Ferguson, Kimberly Frost-Pineda and Mark S. Gold, "Gambling and Problem Gambling Prevalence among Adolescents in Florida: A Report to the Florida Council on Compulsive Gambling, Inc." 2002. Available at http://dspace.ucalgary.ca/bitstream/1880/49261/1/Gambling_Adolescents_Florida_2002.pdf (Accessed August 8, 2013).

[347] Howard J. Shaffer, Richard A. LaBrie, and Debi LaPlante, "Laying the Foundation for Quantifying Regional Exposure to Social Phenomena: Consider the Case of Legalized Gambling as a Public Health Toxin, *Psychology of Addictive Behaviors*, Volume 18, p. 42.

[348] http://quickfacts.census.gov/qfd/states/12000.html (Accessed August 7, 2013)

and one for lifetime prevalence estimates. Thus, we use the information from the above two tables, along with the population estimate, to calculate the data in the following two tables.

Figure 112: Gross social cost estimates for Florida past-year prevalence estimates

Definition	Pathological Gamblers	Problem Gamblers	Total Estimated Cost
Economics	$172,351,000	$ 86,156,000	$258,507,000
Economics + transfers	$390,717,000	$195,397,000	$586,114,000
Economics + transfers + internalized costs	$548,754,000	$274,309,000	$823,063,000

Source: Spectrum Gaming Group summary. All amounts are rounded to the nearest $1,000.

Figure 113: Gross social cost estimates for Florida lifetime prevalence estimates

Definition	Pathological Gamblers	Problem Gamblers	Total Estimated Cost
Economics	$287,252,000	$ 86,156,000	$ 373,408,000
Economics + transfers	$651,195,000	$195,397,000	$ 846,592,000
Economics + transfers + internalized costs	$914,494,000	$274,309,000	$1,188,803,000

Source: Spectrum Gaming Group summary. All amounts are rounded to the nearest $1,000.

The range of estimates is, for social costs based on past-year problem and pathological gambling, between $258 million and $823 million per year. For lifetime problem and pathological gambling, social costs are estimated at between $373 million and $1.19 billion per year. Based on our earlier discussion regarding the definitional and measurement issues, we believe the "best" estimates to be the economics definition-based estimates of $258 million (past-year) and $373 million (lifetime). These estimates are highlighted in the summary tables. It should be emphasized that these are gross costs, not net. That is, these estimates do not take into account the potential social benefits from legalized gambling.

Earlier we argued that the increased availability of gambling, say because new casinos are built or slot machines are added to existing pari-mutuels across Florida, might cause a temporary increase in the prevalence of problem and pathological gambling. However, as suggested by the social adaptation model, we would expect that the rates would fall back to close to their original level after some time. If one wished to adjust the monetary estimates of social costs to account for this temporary increase in prevalence, the monetary values could simply be adjusted by the expected increase in prevalence. For example, if we are using the economics definition of social cost for past-year social costs, and we believe that the year after gambling is expanded the prevalence of both problem and pathological gambling would increase 20 percent, then we can simply multiply the $258 million figure from Figure 112 by 1.2 to arrive at the new social cost estimate with increased prevalence.

This adjustment is simple, and it is also arbitrary. In the gambling literature there is no good methodology for estimating the likely temporary increase in prevalence of gambling disorders. However, we view this issue as relatively unimportant, since presumably, whatever information social cost estimates provide to policymakers would be used for making a long-term decision about gambling policy. We would not expect such data to be useful at informing a very short-term policy change, as the short-term change in prevalence adds another unknown to an already highly arbitrary area of inquiry (social cost estimation).

Finally, we should re-emphasize the potential problems with these monetary estimates that were highlighted above (figures 86-87). We believe it would be irresponsible or possibly even deceptive for a person to quote the gross social cost estimates provided here without also acknowledging some of the potentially serious problems we have indicated above (i.e., comorbidity, unmeasurable costs being excluded, estimates based on GA survey respondents). Because of the highly arbitrary methodology for deriving these estimates, and because of the definitional issues discussed above, one should not have too much confidence in the accuracy of the estimates provided. Indeed, one problem with providing specific estimates for a number that is essentially unknowable is that it creates a false sense of precision. That is, since a precise monetary estimate (or even a narrow range of estimates) is being provided, it may give the impression that the numbers were derived through a highly scientific and refined process. This is certainly not the case for social cost of gambling estimates either here or anywhere else in the literature. This should be clearly understood by anyone using social cost estimates to inform opinion or policy on gambling.

Despite all of these concerns, one could argue that the use of some social cost estimate is better than no estimate; after all, social costs exist. Perhaps the errors in measurement are about equally distributed on both sides (below and above) of the true value of the social costs of gambling. In any case, the social cost estimates we provide here are but one possible measure of the social costs associated with problem and gambling disorder. Other researchers could produce estimates that are very different from ours.

E. Concluding Thoughts

Social impacts associated with gambling expansion can take many forms. In this chapter, we presented an evidence-based discussion related to exposure- and expansion-related gambling, gambling problems, crime and social costs. Although the presence of these issues are well-known and readily acknowledged by the vast majority of interested observers, whether and to what extent these problems are specifically the result of gambling expansion remains to be determined. Although it is a recurring theme, it is worth repeating that, absent the necessary prospective longitudinal research, it is not possible to determine with confidence whether expanded gambling specifically leads to, for example, more crime, mental disorder and other social problems.

Popular opinion suggests that more gambling opportunities will translate into commensurate gambling problems. However, the scientific literature suggests that the relationship between gambling, expanded gambling and gambling exposure is not so straightforward. As we described previously, the prevalence of gambling disorders has remained relatively steady from the middle 1970s to the present. Some observers would argue that the rate actually has declined. At the very least, the current evidence reveals that the rate of gambling disorder in the United States is about the same as it was prior to the dramatic expansion of gambling. The relatively steady prevalence rate of disordered gambling suggests that factors other than expanded gambling are the primary influences on the extent and course of the disorder among the community.

Because gambling has become ubiquitous and perhaps saturated community exposure, further expansion of gambling is not likely to have the same impact as the original expansion of gambling when many fewer people experienced new exposure to gambling opportunities. One of the reasons for the limited enduring impact of expanded gambling on previously exposed communities is that people adapt to the presence of gambling. It is becoming clearer that exposure and adaptation are countervailing forces that engage when gambling expansion commences. Consequently, the short-term impacts of gambling expansion vary from the long-term impacts. Even when gambling expansion stimulates increased levels of gambling and gambling involvement, people adapt to the presence of gambling and the overall rate of gambling disorder tends to remain relatively stable. This stability suggests that most people have resistance to the presence of gambling. Unfortunately, less than 1 percent of the community is vulnerable to excessive gambling – perhaps because of preexisting disorders (e.g., anxiety, personality, etc.) that tend to occur at a steady rate regardless of gambling expansion. Ideally, prospective longitudinal research will illuminate the relationship between gambling expansion and important outcomes (e.g., gambling, gambling problems), as well as the course of these consequences.

1. Extant Scientific Literature and Gambling Expansion

There is little available scientific evidence suggesting that gambling expansion has stimulated gambling-related problems except for "virgin" gamblers, and even they seem to adapt to the presence of gambling. There are other vulnerable segments of the population that are susceptible to adverse consequences from gambling and other activities (e.g., drinking alcoholic beverages) that are capable of shifting their undesirable subjective state in a desirable direction – even if only temporarily. However, overall, there is little research showing that gambling expansion has changed the prevalence of gambling-related problems. Nevertheless, the body of research focusing on gambling expansion is limited both by its size and its quality. The implications of a small body of weak research is the need for a high-quality longitudinal prospective study. In addition, we need to be mindful of two possibilities – that gambling is related to gambling-related problems as conventional wisdom might suggest, and that gambling-exposed settings have adapted by developing sufficient immunity to gambling that gambling expansion has little impact.

2. Estimating Gross Social Costs

As we have mentioned, the identification of a specific social cost of gambling expansion is entirely dependent upon the operational definition of social cost. To date, the experts in this area have not come to an agreement about a gold standard for defining social cost. In fact, the extent of expert disagreement in this area of research is quite profound. As we noted, the National Research Council[349] summarized that state of the field in its final report by reminding us that most economic

[349] National Research Council, *Pathological Gambling: A Critical Review* (Washington D.C.: National Academy Press, 1999).

analyses reported in the literature is methodologically weak. Fundamentally, these studies are little more than a crude accounting, bringing together readily available numbers from a variety of disparate sources. In the area of gambling, pathological gambling and problem gambling, systematic data are rarely to be found, despite the ongoing pressure for such information. The consequence has been a plethora of studies with implicit but untested assumptions underlying the analysis that often are either unacknowledged by those performing the analysis, or are likely to be misunderstood by those relying on the results. Not surprisingly, the findings of rudimentary economic impact analyses can be misused. Consequently, the best evidence-based discussion offered must include a range of options that cover the breadth of possible definitions and assumptions available.

For Florida, the range of estimates is, for gross social costs based on past-year problem and disordered gambling, between $258 million and $823 million per year. For lifetime problem and disordered gambling, social costs are estimated at between $373 million and $1.19 billion per year. Despite the considerable array of economic information and the observation that much of it is weak, some definitions, arguably, are more firmly rooted in well-accepted economic traditions than others are. We suggest in this chapter that an economics perspective, one in which wealth transfers and internalized costs are excluded from the calculation of social costs, provides the most reasonable expectation for short-term post-expansion, pre-adaptation gross social costs in Florida. This means, given Florida's population, we believe the "best" estimates to be the economics definition-based estimates of $258 million (past-year) and $373 million (lifetime).

3. What We Know about Florida Gambling Expansion

The amount of gambling already available to Floridians is extensive. Specifically, Florida currently offers multiple venues of various types including:

- 8 Indian casinos (7 Seminole, 1 Miccosukee)
- 1 state lottery, the nation's second-largest as measured by FY 2011 sales excluding VLTs
- 27 pari-mutuel facilities (plus intertrack at Ocala),[350] including:
    - 24 with active cardrooms
    - 14 with live greyhound racing
    - 5 with live horse racing (thoroughbred, standardbred, and quarter horse)
    - 6 with active jai alai

[350] Data from Florida Division of Pari-Mutuel Wagering; July 24, 2012, facilities map and fiscal year-to-date data through March 2013. http://www.myfloridalicense.com/dbpr/pmw/documents/FACILITIESMAP--Internet-hyperlinks.pdf and http://www.myfloridalicense.com/dbpr/pmw/documents/Stats/HandleandCardroom2012-2013--2013-05-13--April--YTD.pdf.

- 7 with slot machines

- Charitable bingo throughout the state, regulated at a local level.
- Day-cruise vessels and cruise ships that dock at various Florida ports offer unregulated (but not illegal) casino gambling once they reach international waters three miles offshore on the Atlantic side, but 10 miles on the Gulf side.

Further, abutting states also have extensive gambling opportunities that some Florida residents likely patronize, as well. As noted in this chapter, the scientific literature suggests that gambling expansion does not automatically translate into an enduring set of expanded gambling problems. This is especially true for jurisdictions that already have a meaningful amount of gambling opportunities available to their residents. This means that the scenarios that Florida is considering, from minimal to maximal, probably will not have as diverse an impact as they could in a less gambling-exposed jurisdiction.

4. Caveats and Limitations

As with any scientific discussion, undoubtedly, there might be different ways to understand the extant literature associated with gambling and gambling expansion. As we noted, for example, different operational definitions and search engines might yield different literature samples. We want to emphasize that this analysis of the methodological and epidemiological characteristics of gambling-related expansion should be regarded a "first approximation" to summarizing this body of scientific literature while taking into account the methodological quality of studies. Some stakeholders likely will differ with the logic of our coding system. Others might quarrel with our strategy for weighting the methodological characteristics and expansion characteristics of the expansion studies we identified for this review. We considered alternative weighting schemes and, after further thought, determined there would be minimal impact on the outcomes for the alternatives we considered. Miller et al.'s[351] caveat about his evaluation of the alcohol treatment literature also applies to this project about gambling expansion: despite our multistep "...review process to minimize errors, it is likely that in any project of this size there are over-looked details, and surely judgment calls for specific studies on which reasonable colleagues would disagree" (p. 31). For example, some observers might disagree with our uniform strategy for weighting the methodological features of expansion research studies. Likewise, different social cost definitions always yield different estimates. Consequently, definitive statements remain elusive. Readers should use caution when interpreting the conclusions of this chapter because new findings can shift our understanding of this youthful field in unexpected directions; these shifts can dramatically change how we interpret the available evidence. Consequently, with prospective longitudinal research, social cost estimates, public health challenges and other gambling-related events might

[351] William R. Miller et al., "What Works? A Methodological Analysis of the Alcohol Treatment Outcome Literature," in *Handbook of Alcoholism Treatment Approaches: Effective Alternatives*, ed. R.K. Hester and W.R. Miller (Boston: Allyn and Bacon, 1995).

be reinterpreted – either as less or more the result of gambling expansion. Now, the scientific literature simply is not definitive.

Observers might suggest that we are offering too cautious a perspective. We would ask, when does a pound of anecdote yield an ounce of truth? There are many anecdotes that suggest we know more about the impact of gambling and gambling expansion than we do. In this report, we have provided a systematic, science-based guide to understanding gambling and its potential relationship to a variety of social concerns. Maintaining science as our guide sometimes will lead to unexpected directions. For now, we are at an early stage of scientific inquiry regarding the impact of expanded gambling. The available research only offers associative or correlative findings that preclude causal interpretations.

4. Looking Forward

If the State of Florida decides to expand its gambling and wants to track social and economic impact, dynamic prospective longitudinal studies will be necessary to identify changes that occur within the state. Without prospective longitudinal studies, stakeholders are left with a black box of uncertainty about causal influence for many outcomes. Only with prospective research can Florida examine the fundamental elements and origins of social impact (i.e., incidence, course, duration and influence on existing problems).

PART 2

I. Introduction

The purpose of Part 2 of this study is to examine statistical relationships among economic outcomes and the expansion of gambling in Florida. Although there are any number of scenarios of gambling policy that could be implemented in the state (including the status quo), in this part of the study our consideration focuses on the introduction of destination resort casinos and the introduction of slot machine casinos at existing pari-mutuels in Florida.

Our analysis includes several key economic variables including number of people employed, average wages, and the number of establishments operating. We examine these variables for several different industry classification groups in order to predict likely impacts of casino expansion in Florida. At the outset, it should be emphasized that making predictions about the future values of economic variables is an exercise that is based on a variety of assumptions which, if they were slightly modified, could result in starkly different conclusions. Nevertheless, the information provided by the analysis can be informative to policymakers and voters interested in more information on the possible impacts of casino expansion in Florida.

A. Background

It should be emphasized that a significant portion of the work for this part of the study occurred prior to the actual writing of the report. The development of the Work Plan, in response to the state's directed tasks, involved a considerable amount of effort. This is because we first had to familiarize ourselves with different studies that had been conducted previously, their results, the problems their researchers encountered, and the limitations of their analyses. After consideration of these factors, and given the requirements outlined by the State of Florida for this part of our study, we developed the Part 2 Work Plan.

It became obvious that one of the key limitations to being able to perform the "ideal" analysis is that there is no known dataset that identifies an annual (or quarterly) list of counties in which casinos are operating. Such a dataset does exist for 1990-96, and has been used in a study which is similar to the study we are performing here. Updating this dataset would have taken an enormous amount of time, and could not be done without an army of staff working to manually collect data on all 1,000+ casinos currently operating in the United States.

Since we are able to utilize a previously published study as a foundation for this analysis, we believe the projections and conclusions drawn in this study represent the best type of analysis that can be done for Florida, given data availability and the state of knowledge among academics on the economic impacts of legalized gambling.

B. Preview of Data and Analysis

Numerous economic and social impacts have been discussed previously in Parts 1A and 1B of this study, with a focus on REMI's state-level analysis. Here we focus on several very specific economic variables at a more local (i.e., county) level. By utilizing the available county-level data, we are able to provide a more micro-picture of the likely impacts of casino expansion in Florida. Our key variables are:

- Number of people employed
- Average weekly wages
- Number of establishments

These data are collected at the county-level, for the following industry classifications, based on the North American Industry Classification System (NAICS):

- All industries
- Leisure and hospitality
- Other services (not otherwise classified)

In order to forecast changes in these variables, we rely on a previous study that has estimated the county-level impacts on employment and wages from the introduction of casinos. We also incorporate information from peer counties outside of Florida. We use information on how such variables changed in the peer counties, after the introduction of casinos, to predict the likely impact on Florida counties from the same.

In addition to the county-level analyses described above, this study also includes analysis from REMI, at the state-level, from Part 1B of this study, to estimate state-level impacts on variables such as gross state product, total employment, employment by industry, state tax revenues, and wages and salaries.

This analysis should provide a comprehensive picture of the expected micro-level economic impacts of casino and slot machine expansion in Florida, as well as an overview of the likely macro (i.e., state-level) impacts on key economic variables.

II. Literature review

As was noted in the discussion in Part 1B of this study, the literature on the costs of legalized gambling and gambling disorders is not very well developed. One fairly comprehensive discussion of the "early" literature in this area is the National Research Council's ("NRC") book.[352] We noted in the discussion of social costs that the NRC was critical of the state of research on gambling, as of 1999. There has not been enormous improvement in research on social costs. In addition, the NRC notes that there has not been much good research on economic impacts such as employment, wages, and economic growth and development. The NRC does note several large policy reports that were seen at the time as being relatively good. These included studies on casinos in Wisconsin, South Dakota, Florida, and Australia.[353]

A general concern about the studies reviewed by the NRC is that, in most cases, the studies were policy reports for organizations or government agencies which may have an interest in finding one outcome or another. Most of the studies discussed by the NRC did not undergo a peer review, which is one advantage of relying on academic studies published in peer-reviewed journals. We focus our discussion of background research on selected papers published in such journals.

A. Early Studies

As will be seen in this review, even the early academic literature on economic impacts of casinos in the United States was, for the most part, of questionable quality. This is because casinos began expanding outside Nevada and New Jersey online in the early 1990s. So research published in the mid-1990s would have relied on very limited data. As a result, such studies have very limited useful empirical research and questionable conclusions. The research that has been published beginning in the late 1990s represents a significant improvement in quality. We begin the review with general and theoretical discussions about the economic impacts of casinos. Later we discuss more recent, empirical research.

Consider, for example, the paper by Robert Goodman.[354] Goodman's work received an enormous amount of attention in the mid-1990s because it was some of the first research published on the economic and social impacts of legalized casinos. His 1995 paper summarizes his 1994

[352] National Research Council, *Pathological Gambling: A Critical Review* (Washington, DC: National Academies Press, 1999).

[353] See National Research Council, *Pathological Gambling: A Critical Review* (Washington, DC: National Academies Press, 1999), p. 174-185.

[354] Robert Goodman, "Legalized Gambling: Public Policy and Economic Development Issues," *Economic Development Review*, Volume 13, 1995, p. 55-57.

study, which was later published as a trade book.[355] Among the findings of his study, Goodman notes, "[Casino] expansion has produced increases in employment and tax revenues, but the shift of consumer spending to gambling significantly cannibalizes existing local businesses…" The basic argument here, which has been repeated in a number of subsequent studies, is that casinos generally do not create net employment benefits because the jobs created simply come at the expense of other, competing industries in the local economy. Yet, Goodman presents little empirical support for his claims. However, given the lack of data at the time, Goodman did raise concerns about uncertainty as to the economic impacts of legalized gambling. Although Goodman's research did little to provide answers, he did raise a number of important questions.

William Eadington published an article about casinos and economic development in the same issue of *Economic Development Review* as Goodman's article.[356] Eadington explained the fundamental economic perspective on casino economics. He explained that to the extent that a casino can draw tourists from outside the local region, the economic benefits to the region are more pronounced, compared to a situation when the casino serves a more local clientele:

> If a casino is purely a tourist facility – if all casino patrons come from outside the jurisdiction – then the facility is effectively exporting casino services. As a result, all revenues generated within the casino, all jobs created within the casino, can be classified as "exports" and will stimulate, via the multiplier process, additional economic activity in the jurisdiction. This is one of the reasons for the success of Las Vegas.[357]

Eadington seems to support Goodman's cannibalization argument, noting that:

> At the other extreme, locations or regions which have casinos that cater predominantly to local or regional residents will not have a stimulative effect on the region's economy. In effect, customers to such casinos would just be redirecting their expenditures from other goods and services provided within the region to the casinos. Thus, jobs created and revenues generated in the casinos would be offset by jobs lost and revenue shortfalls elsewhere in the region. One exception to this guideline is with regard to "import substitution." If the presence of casinos in the region allows regional residents to gamble at local casinos rather than becoming tourists to casinos in other regions, the economic impact from spending so generated is the same as it would be for tourists.[358]

As a result, Eadington suggests that urban casinos will have very different impacts from destination resort casinos in less populated areas. He notes that "most of the customers will be

[355] See Robert Goodman, The Luck Business: The Devastating Consequences and Broken Promises of America's Gambling Explosion (New York, NY: The Free Press, 1995).

[356] William R. Eadington, "Economic Development and the Introduction of Casinos: Myths and Realities," *Economic Development Review*, Volume 13, 1995, p. 51-54.

[357] William R. Eadington, "Economic Development and the Introduction of Casinos: Myths and Realities," *Economic Development Review*, Volume 13, 1995, p. 52.

[358] William R. Eadington, "Economic Development and the Introduction of Casinos: Myths and Realities," *Economic Development Review*, Volume 13, 1995, p. 52.

drawn from the local or regional market. Thus, there is less of an 'export' effect from spending in the casino, and there is therefore little economic stimulus to the metropolitan area."[359]

This suggestion appears to be confirmed by evidence from Mississippi in the early 1990s, just after riverboat casinos were legalized in the state. Walker summarizes a discussion by the Chamber of Commerce director from Tunica, who explains the effect casinos had on his community[360]:

> In January 1992, per capita income in the county was $11,865; …53 percent of residents received food stamps … Since casinos have been legalized, however, land once valued at $250/acre now sells for $25,000/acre… Because of the increased government revenues, property taxes have been lowered 32 percent in recent years… Unemployment has dropped to 4.9 percent... The number of welfare recipients has decreased 42 percent; the number of food stamp recipients has decreased by 13 percent... In 1994 the county recorded the highest percentage increase in retail sales of all Mississippi counties: 299 percent.

There is little doubt that casinos had a positive economic impact in Tunica and in other relatively poor communities in the state. However, it is unclear whether such benefits continue to accrue as casinos have spread across the United States. In the early 1990s, Mississippi casinos could be seen as significant regional tourist attractions. But now, it is not clear how far people will travel to go to those casinos, as they may have closer options.

These suggestions from Goodman and Eadington are in line with how many researchers and politicians view the likely economic impacts of casinos. It would seem to make sense that the economic impacts of casinos, in terms of employment, wages, and economic growth, would be larger in more rural locations than urban ones. Of course, this is probably the case with any business, simply because in a more populous area, any particular firm of a given size will be smaller relative to the local economy.

However, some authors have questioned this conception of casinos as being beneficial only to the extent that they attract tourists and do not compete with other industries. Detlefsen writes,

> Invocation of the substitution effect in this context not only presumes a static, zero-sum economy in which no business can grow except at the expense of other firms. It mistakenly implies that certain types of commercial activities, such as casino gambling, create no new "real" wealth and provide no "tangible" products of value. That view overlooks the key point that all voluntary economic exchanges presumably are intended to improve the positions and advance the preferences of *both* parties (in other words, improve their social welfare). That the gains from such exchanges (particularly in a wealthier, service-oriented economy in which a greater portion of disposable income is consumed for recreational activities) are not easily quantifiable in every case is beside the point. After all, the only true measure of the value of entertainment-oriented goods and services in the diverse US

[359] William R. Eadington, "Economic Development and the Introduction of Casinos: Myths and Realities," *Economic Development Review*, Volume 13, 1995, p. 53.

[360] Douglas M. Walker, *Casinonomics* (New York, NY: Springer, 2013), p. 10.

economy ultimately remains in the spending preferences expressed by individual consumers.[361]

Walker (2013, p. 26) argues that industry cannibalization (or the "substitution effect") is essentially just market competition, and exists for most industries.[362] Most people do not have concern about "substitution" or "industry cannibalization" when a new restaurant opens in town. Perhaps the difference is that casino openings are the direct result of government action (legalization and issuing a casino permit), whereas the opening of most other types of business is routine and relatively unregulated.

In any case, the "industry cannibalization" argument about casinos, which essentially suggests that there will be no net employment changes as the result of casino introduction, was pervasive in the literature. Walker cites the following studies which he claims essentially support this view of casinos: Gazel and Thompson,[363] Goodman,[364] Grinols,[365] Grinols and Mustard,[366] and Kindt.[367]

In his 2004 book, Grinols presents a different version of this theory of casino impacts.[368] However, he discusses in more detail the relationship between economic growth and employment. First, Grinols defines economic development as relating directly to residents' "welfare" or well-being. So economic activity results in economic development, whether or not it results in a net increase in local employment, as long as it increases welfare.[369] While often economic growth is

[361] Robert Detlefsen, "Anti-gambling Politics – Time to Reshuffle the Deck" (Washington, DC: Competitive Enterprise Institute, 1996).

[362] Douglas M. Walker, *Casinonomics* (New York, NY: Springer, 2013), p. 26.

[363] Ricardo Gazel and William Thompson, "Casino Gamblers in Illinois: Who are They?" Las Vegas, NV: UNLV Working Paper, 1996.

[364] Robert Goodman, The Luck Business: The Devastating Consequences and Broken Promises of America's Gambling Explosion (New York, NY: The Free Press, 1995).

[365] Earl L. Grinols, "Gambling as Economic Policy: Enumerating Why Losses Exceed Gains," *Illinois Business Review*, Volume 52, 1995, p. 6-12.

[366] Earl L. Grinols and David B. Mustard, "Business Profitability Versus Social Profitability: Evaluating Industries with Externalities, the Case of Casinos," *Managerial and Decision Economics*, Volume 22, 2001, p. 143-162.

[367] John W. Kindt, "The Economic Impacts of Legalized Gambling Activities," *Drake Law Review*, Volume 43, p. 51-95.

[368] Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004).

[369] Ibid., p. 55.

accompanied by increases in employment, it is not necessarily the case.[370] Economic development may even occur when there is a net decrease in employment.

Grinols provides an intuitive explanation for the substitution (i.e., cannibalization) effect, focusing on employment. He suggests that the employment impacts of casinos can be likened to the impacts of "factories," "restaurants," or "tollhouses."[371] For example, if a casino attracts most of its patrons from outside the local area, say from across the country, then it acts similar to a factory, exporting most of its product. He explains,

> New money is brought in from buyers outside the area and the revenues are used to pay local workers' wages, suppliers, and owners' profits. This money, in turn, is recycled by being spent in the region. Secondary suppliers arise to serve the secondary demands. New local jobs are created – both directly at the factory and in the secondary sectors. These represent a true net increase in local employment. A variant of the factory is a business that serves local demand that would have flowed to outside had the local factory not been present. Meeting demand that might otherwise have been met by imports is called import substitution. Import substitution also leads to a net increase in local jobs compared to the no-factory alternative.[372]

This example would seem to describe Las Vegas quite well, and perhaps a few other markets during the 1990s (e.g., the Mississippi gulf coast and Atlantic City). However, with the proliferation of casinos, there may be few "factory" markets other than Las Vegas.

Another category described by Grinols is "restaurants," which characterizes casinos in many jurisdictions. Grinols writes,

> A restaurant generally serves local residents and existing tourists. Adding another restaurant to a town that already has many increases employment in the new restaurant but does not increase total employment. Because no new dollars are attracted from the outside, the restaurant redistributes money within the local economy: increased demand at one location comes at the expense of demand at another.[373]

The third category Grinols describes is the "tollbooth," in which the

> ... firm collects money from local buyers and those outside the region, but the positive effect is negated because an equally large or larger flow of money goes out. The net effect

[370] Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004), p. 60-63.

[371] Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004), p. 67-69.

[372] Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004), p. 68.

[373] Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004), p. 67-68.

is that the local economy is reduced to the role of being a collection booth for the industry. The impact could either be to expand or to shrink the local economy.[374]

Grinols' scenarios seem generally to be consistent with both Goodman's and Eadington's conception of casinos and employment. However, Grinols' discussion of spending and jobs suggests that there are relatively few cases in which casinos could have a positive impact on the local economy.

Walker argues that Grinols' discussion, and the cannibalization argument generally, ignores the fact that spending at a new business, even if the spending comes entirely from local residents, can increase welfare.[375] Indeed, even using Grinols' factory-restaurant classification, one would expect the new option for consumers (i.e., additional variety for spending options) to increase their well-being. As Grinols himself notes, economic development depends on well-being, not necessarily only on employment. In addition, one could argue that, even if there is no net change in overall employment after the opening of a casino, since the jobs are producing in firms that are seeing increased demand/expenditures, then the jobs are higher-valued, from a societal/economic perspective.

Although there is a somewhat well-developed literature on the substitution/cannibalization effect, overall there is little empirical evidence on either side of the debate.

B. Recent Studies

We now examine studies that provide more empirical evidence on the economic impacts of casinos than some of the studies discussed above. In their comprehensive book on gambling, Morse and Goss analyze county-level employment and per capita income.[376] They present changes in county employment and per capita income, depending on whether a casino was introduced in the county in 1993 or 1994. Changes are shown for 1995-2002.

Figure 114: US county-level changes in employment and income

	1995-2002 Change in County-Level…	
County-Type	Employment	Per Capita Income
Non-casino counties	11.3%	32.8%
Native American casino counties	23.8%	33.3%
Commercial casino counties	6.7%	31.7%

Source: Morse and Goss (2007, p. 60)

Morse and Goss explain that factors other than the existence of a casino could, of course, be explaining the changes shown above. Therefore they perform a regression analysis which

[374] Earl L. Grinols, *Gambling in America: Costs and Benefits* (New York, NY: Cambridge University Press, 2004), p. 68.

[375] Douglas M. Walker, *Casinonomics* (New York, NY: Springer, 2013), p. 29.

[376] Edward A. Morse and Ernest P. Goss, *Governing Fortune: Casino Gambling in America* (Ann Arbor, MI: University of Michigan Press, 2007), p. 59.

accounts for a variety of other characteristics in the counties. The results can be seen as a truer representation of the impacts of casinos on employment and per capita income. Their regression results are reproduced in the table below.[377]

Figure 115: Change in economic factors after 15 years of casino operation

	Compound Annual Change in Per Capita Income	Compound Annual Change in Employment	Change in Unemployment Rate
Commercial casino counties	3.0%	4.2%	-1.0%
Native American casino counties	2.7%	4.1%	-0.9%
Non-casino counties	3.2%	1.7%	-0.4%

Source: Morse and Goss (2007), p. 66.

Their analysis indicates that per capita income growth (i.e., economic growth) is actually lower in casino counties (both Native American and commercial) than in non-casino counties. However, employment increases at a greater rate in casino counties, and the unemployment rate decreases more in casino counties than in non-casino counties. Obviously, the results show that employment tends to increase as a result of casinos being introduced, but per capita income does not increase as fast in casino counties as in non-casino counties. There is no obvious explanation for why this might be the case. Nevertheless, this is interesting empirical evidence based on casino adoptions that occurred in the early 1990s.[378]

Although the Morse and Goss results suggest casino counties may not see the economic growth seen in non-casino counties, a forthcoming research paper has found a positive effect of casinos on state-level economic growth (per capita personal income). The study by Walker and Jackson[379] examined personal income and casino revenue data from twelve states with commercial casinos, from 1990-2010. (As many studies do, this study excluded Nevada and New Jersey data.) The results indicate a Granger-causal relationship between casino revenues and personal income. Granger causality does not prove one variable causes another. Rather, it indicates that one variable helps in the prediction of the second variable. If the first variable is helping to explain the second one, then it suggests a "causal" type relationship between the two variables.

In a recent in-depth study of the impacts of Canadian casinos on local employment and wages, Humphreys and Marchand found positive local labor market effects:

> The direct labor market growth in the gambling industry shows that areas with new casinos experience large, positive employment and earnings growth within one to five years

[377] Edward A. Morse and Ernest P. Goss, *Governing Fortune: Casino Gambling in America* (Ann Arbor, MI: University of Michigan Press, 2007), p. 66.

[378] It should be noted that their analysis excluded counties in Nevada and New Jersey, so that they would not unduly influence the results (Morse and Goss, 2007, p. 60).

[379] Douglas M. Walker and John D. Jackson, "Casinos and Economic Growth: An Update," *Journal of Gambling Business and Economics*, 2013 (forthcoming). Available at http://walkerd.people.cofc.edu/pubs/2013/GrowthUpdate.pdf,

following the opening of a casino. However, this growth was insignificant for areas with existing casinos, suggesting that the local effects of new casinos do not extend beyond five years.[380]

They caution policymakers considering the introduction of casinos in order to boost employment:

> The evidence presented in this paper suggests that a skeptical approach be taken regarding the use of employment and earnings gains to justify the legalization of expansion of casino gambling within a locality. Any expectations of new jobs or earnings enhancement should be considered short-term and narrowly-focused within the gambling and hospitality industries. Broad employment and earnings gains in other local industries outside of gambling and hospitality should not be expected.[381]

The paper by Hashimoto and Fenich[382] is somewhat similar to the analysis we will perform later in this study. These authors examined county-level changes in employment, number of establishments, and annual payroll in several Mississippi counties. For the most part, they found that the introduction of casinos led to an increase in all three variables, which raises questions about the validity of the "substitution effect":

> In the four different counties in Mississippi, the legalization and subsequent development of casino gaming did not drive all the local restaurants out of business. Casinos did not cause the predicted drop in the number of businesses, nor the drop in people employed, nor the drop in payroll. In fact, just the opposite occurs.

They point out that these results do not include the restaurants offered on casino properties, and argue that the casinos have quite clearly had a positive economic impact in Mississippi. However, it is worth noting that in some of the counties studied, there was not a lot of economic activity prior to the casinos being built. In Tunica, for example, there were only 8 or 9 restaurants prior to the opening of a casino. It would be difficult to imagine a new casino, with the traffic it would generate, would harm the few incumbent restaurants. Yet, the same results were found in counties with 40-60 establishments.

The study by Garrett examines selected casino counties in Mississippi, Illinois, Iowa, and Missouri.[383] Garrett notes that most previous studies (that he reviewed, from the 1990s) have found

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[380] Brad R. Humphreys and Joseph Marchand, "New Casinos and Local Labor Markets: Evidence from Canada," University of Alberta working paper, June 2013, p. 27. Available at http://www.economics.ualberta.ca/~/media/economics/FacultyAndStaff/WPs/WP2012-16-Humphreys-Marchand.

[381] Ibid., p. 28.

[382] Kathryn Hashimoto and George G. Fenich, "Does Casino Development Destroy Local Food and Beverage Operations?: Development of Casinos in Mississippi," *Gaming Law Review*, Volume 7, 2003, p. 101-109.

[383] Thomas A. Garrett, "Casino Gaming and Local Employment Trends," *Federal Reserve Bank of St. Louis Review*, Volume 86, 2004, p. 9-22.

a positive impact of casinos on employment.[384] Garrett's analysis tracks total employment before and after casino introduction, so that he is able to forecast what employment would have been had casinos not been introduced. He also analyzes payrolls before and after casino openings.

Garret finds positive impacts of casinos on employment and payrolls in three of the four rural counties he studied.[385] He also notes that pinpointing the impacts of casinos in metropolitan areas is more difficult, since the casino represents a small proportion of the overall economy, relative to a casino in a rural area. This idea is supported by other research, discussed above.

One important point that Garrett makes that is relevant for our analysis of Florida is that studying the employment impacts of casinos at a county level requires the researcher to pay careful attention to interpreting changes in the variables, especially in rural counties. For example, when a casino opens in a rural county, county employment certainly increases, perhaps dramatically so. But this change would not necessarily imply that employment among county residents has increased. It may instead indicate that a lot of people from other counties are getting jobs at the casino. This issue is less likely to arise in an urban setting, as the opening of a casino is unlikely to attract a large number of people seeking employment from outside the area, at least relative to a rural setting.

C. Summary

Despite the spread of casinos across the United States, and in many other countries, there have still been relatively few empirical analyses of the economic impacts of casinos. This is somewhat surprising, given that in the past decade there have been several new academic journals started that focus entirely on gambling issues. Most of the research on gambling focuses on pathological gambling (diagnosis, prevalence, and treatment).

Although the literature review above is not exhaustive, the available evidence seems to support the idea that casinos have at least modestly positive impacts on local employment, wages, and economic growth. Contrary to casino critics' claims, there does not seem to be empirical evidence to support the "substitution effect" argument that is so commonly raised in public and academic debates over casinos.

In the following sections, we will review a key study in the literature from which we will adapt our analysis to follow. The 2008 study by Cotti appears to be the most authoritative study on the employment and wage issue to date.

[384] Thomas A. Garrett, "Casino Gaming and Local Employment Trends," *Federal Reserve Bank of St. Louis Review*, Volume 86, 2004, p. 13.

[385] Thomas A. Garrett, "Casino Gaming and Local Employment Trends," *Federal Reserve Bank of St. Louis Review*, Volume 86, 2004, p. 21.

III. Foundation for Florida Analysis: Cotti's 2008 Study

As we explained in the background section of this report, the development of the plan for analysis was time consuming because we had to determine the best way to analyze the likely economic impacts of expanded gambling on Florida, given very limited data at a county-level. The one study that provides the most guidance, and frees us from having to "reinvent the wheel," is the study by Cotti.[386] That study is certainly the most comprehensive published study on the employment and wage impacts of casinos in the United States. Cotti's paper estimates county-level impacts for all industries, as well as for the entertainment/hospitality sector, to give a general picture of the economic impacts of casinos.

Cotti discusses the cannibalization issue that was discussed earlier in this report. A casino which creates a large "substitution effect" and therefore reduces employment in other industries could lead to decreased employment in a county. Alternatively, if there are industries that are complementary to casinos that thrive after the introduction of a casino, more than offsetting any substitution with other industries, then the casino will lead to a net increase in county employment.

Overall, Cotti finds that "casino introduction increases aggregate employment in host communities relative to counties without a casino" (p. 18). Important details of the findings include:

- Benefits are focused in the entertainment sector (of which the casino industry is part)

Intuitively, we would expect that the economic impacts of casinos, particularly with respect to employment and wages, should be more pronounced when considering industries that are most closely related to the casino industry. For example, if casinos largely cannibalize other entertainment firms, then we should see little net job creation when a casino is opened. But we might not expect a new casino to have much of an effect on employment in the auto-repair industry, for example, because there is really no direct link between the two industries. The choice of industries should be based on the goal of capturing those most closely related to the casino industry.

- The strongest impacts are found in low-population counties

Whatever the impact a new casino has on employment and wages, we should expect those impacts to be most pronounced in smaller jurisdictions. The logic is obvious. Suppose a casino hires 1,000 employees. When the employment and wage impacts work their way through a county with only 5,000 residents, the impacts will be relatively large, in proportion to the county overall. On the other hand, a casino hiring 1,000 employees in a county that is home to 1 million people would be unlikely to have a noticeable impact on the local economy.

[386] Chad D. Cotti, "The Effect of Casinos on Local Labor Markets: A County Level Analysis," *Journal of Gambling Business and Economics*, Volume 2, 2008, p. 17-41.

- Aggregate employment is affected little in neighboring jurisdictions

This indicates that there is not a measurable impact outside the casino county, suggesting that most of the impacts are localized and occur in the immediate vicinity of the casino. This makes intuitive sense, as it may be difficult for individuals to travel to an adjacent county for a job without moving their household. Of course, there are likely to be many individual exceptions to this, but Cotti's analysis suggests that, on average, the economic impacts of a casino largely remain within a county.

In addition, there are some data limitations and caveats from the Cotti study which should be noted:

- The analysis does not account for casino sizes

This is an issue initially raised in Walker's 2008 critique of Grinols and Mustard's analysis of casinos and crime at the county level.[387] The Cotti study utilizes the casino existence data from Grinols and Mustard's 2006 study. Specifically, the data used in the Cotti study identifies years in which a casino existed in a particular county, for all US counties (quarterly, from 1990-96). Since the data set does not account for the sizes of casinos, or how many casinos there are in a county, the analysis is not particularly sensitive to the volume of gambling in the county. This is a serious limitation of the analysis, as we would expect that employment and wage impacts from casinos would certainly be sensitive to the size of the industry. Unfortunately, there is no known dataset of casino volume by county for the United States, so the data used by Cotti is still the best available, to our knowledge. According to our interview with Chad Cotti, it would be a very serious undertaking to update and expand this dataset, since it would require recording the opening data of 1,000+ casinos in the country.[388] Measuring casino size would be an overwhelming task, even for a large staff, as it would require that all casino expansions, closures, and openings be accounted for.

- The QCEW data do not distinguish between part-time and full-time employees

Cotti notes that this is an unfortunate limitation of the data.[389] In addition, the data do not track number of hours worked. Nevertheless, the data include number of people employed and average weekly wages, so they still provide a good picture of the labor market in each county.

[387] Douglas M. Walker, "Evaluating Crime Attributable to Casinos in the U.S.: A Closer Look at Grinols and Mustard's 'Casinos, Crime, and Community Costs'," *Journal of Gambling Business and Economics*, Volume 2, p. 23-52.

[388] Phone interview with Chad Cotti by Doug Walker, August 24, 2013.

[389] Chad D. Cotti, "The Effect of Casinos on Local Labor Markets: A County Level Analysis," *Journal of Gambling Business and Economics*, Volume 2, 2008, p. 22.

A. Cotti's Data

Cotti utilizes data from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW). The QCEW provides county-level payroll data in narrowly-defined industries. "The industrial sector of all firms in the data is coded according to the North American Industrial Coding System (NAICS), and aggregations of the data by county, industry, and quarter are available to users, beginning with the initial data collection for the first quarter of 1990."[390, 391]

The data are collected from employers' paperwork related to the unemployment insurance program. Cotti notes that the data are comprehensive,

> All firms with workers subject to state and federal unemployment insurance laws are represented in the data, which, according to the Bureau of Labor Statistics (BLS), covers 99.7 percent of all wage and salary civilian employment.[392]

Cotti collected employment and wage data for 28 quarters (1990-1996) on all counties in the United States, with the exception of Nevada and New Jersey. (These states are omitted because they have mature casino industries and Cotti did not want them to unduly influence his results.) Since Cotti's empirical analysis is based on the employment and wage data for most counties in the United States, it helps ensure that our use of his results in our own estimation uses information from all US counties (as required in the State of Florida's Project Plan), except for Nevada and New Jersey. Counties in these states were omitted from the study so that they did not unduly influence the results. In total, Cotti's data includes 600,000 quarterly observations on employment and wages for county-level sectors,[393] making it the most comprehensive published study (to our knowledge).

Cotti analyzes the effect of casinos opening in counties on employment and wage data. To do this, he utilizes a dataset that indicates the period in which each casino opened in each county in the United States, from 1990-96. His data includes 161 counties that had casinos open within their borders during his sample period.[394] By including a variable representing the existence of a

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[390] Chad D. Cotti, "The Effect of Casinos on Local Labor Markets: A County Level Analysis," *Journal of Gambling Business and Economics*, Volume 2, 2008, p. 22.

[391] Because the QCEW data are based on data categorized by NAICS, we utilize the QCEW data for the analysis of number of establishments for the geospatial analysis discussed below.

[392] Chad D. Cotti, "The Effect of Casinos on Local Labor Markets: A County Level Analysis," *Journal of Gambling Business and Economics*, Volume 2, 2008, p. 22. For more information on the QCEW data, see www.bls.gov/cew/cewover.htm. These data serve as the foundation for a wide variety of federal government statistics on employment and wages.

[393] Chad D. Cotti, "The Effect of Casinos on Local Labor Markets: A County Level Analysis," *Journal of Gambling Business and Economics*, Volume 2, 2008, p. 23.

[394] Cotti also analyzes the casino impact on counties that neighbor casino counties. However, he finds minimal impact on counties adjacent to casino counties (p. 37).

Native American or commercial casino in counties, Cotti is able to isolate the economic impacts that casinos have in counties across the United States.[395]

Aside from the data on casino openings and county-level employment and wages, Cotti also utilizes a variety of other demographic variables that are typically included in econometric studies of this sort. They include: county population, unemployment rate, percentage of population that is white, and percentage of population that is female.[396]

We utilize Cotti's analysis and results to estimate the likely impacts of casinos in Florida. There are several key benefits to this approach:

- Cotti's study uses the latest known dataset on casino opening dates at the county level.
- It is an efficient option for analyzing the economic variables of interest, since the data collection for all casinos in the United States would take significant time and expense, and could not be done under the time constraints and budget for the current study.
- There is no fundamental reason why the relationship between casinos and county-level economic variables should have changed significantly over time, and, in particular, between the time Cotti's study was published in 2008, and currently.[397] Cotti's sample period is from 1990-96, a period of significant expansion of casinos in the United States. The US landscape during that period is similar to the casino gambling landscape in Florida and the southeast region, as neither neighboring state has significant gambling opportunities for consumers. Therefore, the results based on Cotti's analysis may be particularly well-suited for analyzing the current market status in Florida and the region.[398]

[395] Unfortunately, we are unaware of any existing dataset that includes the scale of casino gambling at a county-level. Therefore we are unable to estimate the impact of casinos on employment and wages in a way that is sensitive to the volume of gambling. Although some studies have utilized casino revenue data at a state level, there is no good way of decomposing state-level aggregates into county-level data, especially since detailed revenue data are generally not available for Native American casinos, and Native American casinos make-up a significant proportion of Cotti's 161 casino counties. Therefore, we are unable to perform the analysis according to scale.

[396] Chad D. Cotti, "The Effect of Casinos on Local Labor Markets: A County Level Analysis," *Journal of Gambling Business and Economics*, Volume 2, 2008, p. 27.

[397] Cotti's analysis relies on quarterly data from 1990-96, a period of significant expansion of casinos in the United States. The US landscape during that period is similar to the casino gambling landscape in Florida and the southeast region, as neither neighboring state has significant gambling opportunities for consumers. Therefore, the results based on Cotti's analysis may be particularly well-suited for analyzing the current market status in Florida and the region.

[398] In Spectrum's interview with Cotti, he agreed with this, and noted that, even if we utilized an updated database for casino existence, we would still be applying those results to Florida. (Phone interview with Chad Cotti, August 24, 2013.) Any related problems that arise in our analysis would still exist, even if we were re-doing the entire Cotti analysis with more up-to-date data.

- Since Cotti's data, model, and results went through a rigorous academic review process, readers can be confident that the foundation for our empirical analysis has been vetted by independent researchers. As the Cotti study appears to be state-of-the-art, there is no reason to "reinvent the wheel" for this part of the analysis.

B. Cotti's Analysis

Cotti utilizes ordinary least squares regression analysis (p. 25), which is a standard econometric methodology.[399] For his dependent variables, he uses the log of employment and log of earnings. By doing this, one can interpret his estimated coefficients as percentage changes in the dependent variable. So, for example, if the casino variable has a coefficient of 0.03 in the model on employment, it would indicate that the casino has a 3 percent positive effect on county employment during periods in which a casino is operating in the county.

Explanatory variables in the model include the demographic variables mentioned above, as well as dummy variables for county and quarter (i.e., county fixed-effects and quarter fixed-effects). These different variables help to control for differences in economic conditions across counties and through time. Controlling for these variables helps to ensure that the empirical results Cotti finds are the impacts on employment and earnings that are due specifically to the existence of a casino in the county, and not to any other factor. That is, the estimated coefficient provides the effect of casinos on employment and wages, holding everything else constant.

The two main variables that Cotti analyzes are employment and earnings. He tests the effect of casino existence on these variables at three different industrial levels across counties. He first tests total county employment (or employment in all industries). He subsequently tests the impact of casinos on two supersectors: Arts, Entertainment, and Recreation; and Accommodations and Food Services. In our analysis we estimate the impacts on "all industries," as Cotti does, and also on Leisure & Hospitality, which is the aggregate of the two supersectors that Cotti tests individually. In addition, we estimate the effects of casinos on "Other Services," based on the experiences in other peer counties. Since Cotti did not estimate a casino effect for "Other Services," we cannot use his study as a basis for the analysis of that sector.

C. Cotti's Results

The key results from Cotti's study are discussed below. It should be noted that there are a variety of different models estimated in the paper, and we present only the most relevant for our application to Florida.

[399] It is unnecessary, and beyond the scope of this report, to go into detail on the econometric particulars of Cotti's study, since we are applying his results to Florida county data, rather than re-estimating his model. Nevertheless, here we provide a brief summary of Cotti's model description, found on p. 23-26.

1. Basic Results

In the first case, Cotti estimates the "casino existence" effect on overall county-level employment, i.e., that for all industries. His results indicate that the casino effect on employment is about +8.2 percent. That is, controlling for all other factors, casino counties will see 8.2 percent more jobs than non-casino counties, on average. However, county-level earnings for all industries (as a group) increase by less than 1 percent (0.79 percent) in casino counties, relative to non-casino counties. Based on these initial results, Cotti suggests that casinos "play a significant role in increasing both employment, earnings, and promoting economic development in a county" (p. 28).

Next Cotti isolates two different "supersectors" of industries: Entertainment (which includes arts, entertainment, and recreation, including casinos) and Hospitality (which includes food services and accommodations, including casino hotels).

When Cotti tests the casino impact on employment and earnings in the Entertainment sector, he finds that casinos have a large impact on overall employment, leading to 50.3 percent more jobs than in counties without a casino. However, Cotti notes that 30 percent of casino counties have fewer than 200 entertainment sector workers prior to the casino opening; this certainly helps to explain the large magnitude of the casino effect.[400] In addition, the earnings effect is also somewhat large: 19.1 percent, which Cotti attributes to the large increase in demand in the labor market that occurs when a new casino opens. These results indicate that the casino operations do have a significant impact on local labor markets.

The effect of casinos on the Hospitality sector are much milder, as Cotti finds no statistically significant impact on employment. (His estimate is that employment actually falls by about 1.6 percent, an effect that is not statistically significant from zero.) With respect to earnings, the casino impact on the Hospitality industries is found to be a statistically significant +3.5 percent.

The table below summarizes the findings. In the last row of the table, we calculated the weighted average of the casino impacts on the entertainment and hospitality sectors. The average number of employees per county in the entertainment sector was 903 for Cotti's sample. For the hospitality sector, it was much larger, 4,256.[401] If we weight the sectors' employment and wage impacts from casinos according to the sizes of the sectors, we see that if we were to aggregate the sectors, we would expect and average of 7.5 percent increase in employment in casino counties relative to non-casino counties, and earnings in casino counties would be 6.2 percent higher in these sectors, compared to the earnings in non-casino counties.

[400] Chad D. Cotti, "The Effect of Casinos on Local Labor Markets: A County Level Analysis," *Journal of Gambling Business and Economics*, Volume 2, 2008, p. 28.

[401] The total number of employees (on average across counties) in both sectors is 5,159. Thus, the entertainment sector comprises 17.5 percent of employment (903 divided by 5,159), while the hospitality industry represents 82.5 percent of the total (4,256 divided by 5,159).

Figure 116: Estimated county-level effect of casinos

Sector	Employment Effect	Earnings Effect
All Industries	+ 8.2%	+ 0.79%
Entertainment (NAICS 71)	+50.5%	+19.1%
Hospitality (NAICS 72)	- 1.55%	+ 3.47%
Weighted Average of Entertainment and Hospitality Sectors	*+ 7.52%*	*+ 6.16%*

Source: Cotti (2008, p. 27). Weighted average calculation by Walker, Spectrum Gaming Group.

If we consider a series of quarterly data on employment and earnings for counties in Florida, then we could apply the results from Cotti's analysis by adjusting the intercept (not the slope) of the trends by the values listed in the table. In particular, we have data on the Leisure and Hospitality supersector (entertainment and hospitality aggregated). So an initial prediction of the impact of casinos on selected Florida counties would be a jump in employment by 7.5 percent, while earnings would increase by 6.2 percent.

Of course, a key caveat to consider is that the results shown above are for the "average" county in the United States. We would not expect this pronounced casino impact in a very populous county such as Miami-Dade. But the results may be more likely to reflect what could happen in a county such as Washington (i.e., an average size county).

2. Time Trend

Next Cotti introduces county-level trends into his analysis. The inclusion of a trend variable, that simply counts from the beginning term of the sample period, to the end, controls for the fact that often variables move according to a long-established trend. If this is the case, then the positive employment and earnings impacts shown in the table above may be more due to trends than to the introduction of casinos. Indeed, Cotti's analysis confirms that this is the case, as the results in the table below indicate much smaller casino effects.

Figure 117: Estimated county-level effect of casinos, accounting for county trends

Sector	Employment Effect	Earnings Effect
All Industries	+ 3.12%	+ 0.35%
Entertainment (NAICS 71)	+22.4%	+ 7.24%
Hospitality (NAICS 72)	+ 1.71%	+ 2.26%
Weighted Average of Entertainment and Hospitality Sectors	*+ 5.33%*	*+ 3.12%*

Source: Cotti (2008, p. 31). Weighted average calculations by Walker, Spectrum Gaming Group.

Now the weighted average effects for the Entertainment and Hospitality supersector indicate that, accounting for trends in the data, casinos increase employment about 5.3 percent compared to non-casino counties, while they have a positive effect on earnings of about 3.1 percent, compared to non-casino counties. While this effect may seem relatively minor, even these increases could be seen as politically valuable given the slow recover from the 2007-09 recession.

3. Counties in Casino States Only

Next, Cotti re-estimates the effects considering only counties in states that have at least one casino. (That is, he eliminates from the model observations from counties in states where there are

no casinos.) Cotti explains, "From the perspective of cultural or regional norms, the non-casino counties in casino states (states that have at least one casino in place) may provide a better control group."[402] Eliminating counties in non-casino states may also prevent these counties from over-influencing the empirical results.

The results of this model are shown in the table below. The weighted averages of the estimated effects for entertainment and hospitality industries are lower than in the previous specifications. One possible explanation for this is that states that legalized casinos in the early 1990s (the period covered by Cotti's dataset did so, in part, because of dismal economic conditions and fiscal stress on the part of the state governments. This explanation of casino legalization is confirmed, among other potential explanations, in a recent study.[403]

Figure 118: Estimated county-level effect of casinos, counties in casino states only

Sector	Employment Effect	Earnings Effect
All Industries	+ 2.72%	+ 0.66%
Entertainment (NAICS 71)	+25.1%	+ 7.44%
Hospitality (NAICS 72)	+ 0.57%	+ 1.53%
Weighted Average of Entertainment and Hospitality Sectors	*+ 4.86%*	*+ 2.56%*

Source: Cotti (2008, p. 31). Weighted average calculations by Walker, Spectrum Gaming Group.

4. Controlling for Lead and Lag Periods

For the next step in his analysis, Cotti recognizes that there is no reason to believe that, whatever effect casinos have on employment and wages, these effects will be constant over time. He therefore re-estimates the model and includes lead- and lag-periods instead of a time trend. That is, he isolates the casino impact on employment and wages for each year since the casino was introduced in a county. He does this for years 1 through four, and for five and more years after casino introduction.[404]

The results for the intertemporal model including all industries in the county suggests around 4 percent employment growth for the first two years after casino introduction, but no statistically significant employment growth, compared to non-casino counties, after that. Cotti finds no statistically significant earnings effect for all industries as a group. This is consistent with management practice. It is common for new casinos to open with higher staffing in year one, slightly reduced staffing in year two, and a stabilized workforce by year three. Casinos in Ohio,

[402] Chad D. Cotti, "The Effect of Casinos on Local Labor Markets: A County Level Analysis," *Journal of Gambling Business and Economics*, Volume 2, 2008, p. 31.

[403] Peter T. Calcagno, Douglas M. Walker, and John D. Jackson, "Determinants of the Probability and Timing of Commercial Casino Legalization in the United States," *Public Choice*, Volume 142, 2010, p. 69-90.

[404] Chad D. Cotti, "The Effect of Casinos on Local Labor Markets: A County Level Analysis," *Journal of Gambling Business and Economics*, Volume 2, 2008, p. 33.

for example, employ significantly fewer staff in 2013 than they hired at opening in 2012, particularly since revenue projections were overly optimistic.

In the entertainment sector, however, the results indicate between 14 percent and 39 percent employment growth after the introduction of casinos, relative to non-casino counties. The results are all statistically significant, indicating a stable longer-run employment effect from casinos on the entertainment industry. As for earnings, in years 1 – 3 following casino introduction, there is an average of around 9.3 percent increase in earnings. But there are no statistically significant effects in the fourth year or beyond. This suggests no long-term impact of casinos on average wages in casino counties, relative to non-casino counties.

Finally, for the hospitality sector, Cotti finds that there is a 7.1 percent positive impact of casinos on employment, but only beyond 5 years after casino introduction. There is a very modest 3 percent positive earnings impact for the first 3 years after casinos open.

Overall, the intertemporal models suggest that, while there appears to be a significant positive impact of casinos on entertainment industry employment, the positive impacts from casinos otherwise seem to die out after several years.

5. County Size

Perhaps the most important secondary test by Cotti (for our purposes) is his estimation of the model based on county size (i.e., population). There is good reason to believe that a casino would have a more dramatic effect in a rural (or low population) county, compared to an urban (or more populated) county. As a given size casino would represent a more significant addition to a smaller economy than to a larger economy. Hence, we should expect its economic impacts to be smaller, the more populous the county. Other studies have confirmed that casinos tend to have larger impacts in more rural counties, relative to urban ones.[405] Cotti divides his sample into three groups, according to county population: Top third, middle third, bottom third. The results generally show that the positive employment and wage effects of casinos are larger in the smaller population counties.

In the tables below we reproduce Cotti's results after partitioning his sample into thirds, according to county population. As above, we also show the aggregated entertainment and hospitality sectors, weighted with the same weights as previously.[406]

[405] For example, see Chad D. Cotti and Douglas M. Walker, "The Impact of Casinos on Fatal Alcohol-Related Traffic Accidents in the United States," *Journal of Health Economics*, Volume 29, 2010, p. 788-796.

[406] The sectors would most likely have different weights since the sample is broken up. However, we have no way of knowing which of the jobs in each sector are attributable to counties in the different population categories.

Figure 119: Estimated top-third-population county effects of casinos

Sector	Employment Effect	Earnings Effect
All Industries	+ 0.28%	- 0.12%
Entertainment (NAICS 71)	+17.6%	+ 7.89%
Hospitality (NAICS 72)	+ 0.65%	+ 1.1%
Weighted Average of Entertainment and Hospitality Sectors	*+ 3.61%*	*+ 2.28%*

Source: Cotti (2008, p. 34). Weighted average calculations by Walker, Spectrum Gaming Group.

Figure 120: Estimated middle-third-population county effects of casinos

Sector	Employment Effect	Earnings Effect
All Industries	+ 2.4%	+ 0.1%
Entertainment (NAICS 71)	+22.5%	+ 7.7%
Hospitality (NAICS 72)	+ 2.88%	+ 2.1%
Weighted Average of Entertainment and Hospitality Sectors	*+ 6.32%*	*+ 3.08%*

Source: Cotti (2008, p. 34). Weighted average calculations by Walker, Spectrum Gaming Group.

Figure 121: Estimated bottom-third-population county effects of casinos

Sector	Employment Effect	Earnings Effect
All Industries	+10.5%	+ 1.84%
Entertainment (NAICS 71)	+28.7%	+ 6.74%
Hospitality (NAICS 72)	+ 3.1%	+ 4.59%
Weighted Average of Entertainment and Hospitality Sectors	*+ 7.56%*	*+ 4.96%*

Source: Cotti (2008, p. 34). Weighted average calculations by Walker, Spectrum Gaming Group.

Cotti argues that simply because there is a smaller percentage increase in employment in larger counties, that does not necessarily translate into a greater number of absolute jobs, relative to a large percentage increase in a smaller county. "A casino of a given size creates a certain number of jobs, regardless of the size of the community that hosts it."[407] Of course, we might expect larger cities to host larger casinos. For example, there have been controversial proposals to build very large casinos in Miami. But large casinos are not always in large cities either, as is demonstrated by the Foxwoods and Mohegan Sun casinos in rural Connecticut.

6. Other Findings

Cotti also tests whether casinos appear to help or hinder other industry sub-types. He tests the impact of casino entry into a county on employment and earnings of other industries which might be expected to compete with casinos and casino hotels.[408] Generally, there are few results that are statistically significant, other than the positive employment effect on accommodations and "amusement, gambling & recreation." There are no industries which see either a negative employment or earning effect that is statistically significant (Cotti, p. 36). This suggests that casinos tend to be mild complements, rather than substitutes, for other industries, overall.

[407] Cotti, interview with Walker 8/24/13.

[408] Chad D. Cotti, "The Effect of Casinos on Local Labor Markets: A County Level Analysis," *Journal of Gambling Business and Economics*, Volume 2, 2008, p. 36.

Lastly, Cotti tests whether the employment and wage effects affect counties adjacent to the casino counties. However, he finds no statistically significant impacts on either employment or wages for all of the sectors he tests, with one exception. The neighboring county entertainment industries see a positive employment effect of 4.7 percent. But this is the only statistically significant neighboring-county effect.

The results of Cotti's tests of casino impacts on other industries (intra-county), as well as on industries in neighboring counties, provides a strong reason to doubt the "cannibalization" story or "substitution effect" that is raised by many casino critics. Based on Cotti's county-level study of employment and wages, casinos have almost no negative impact on other industries, and at least a mildly positive impact on some industries. In fact, this finding is consistent with other evidence from the literature. For example, Wiley and Walker found that casinos have a positive impact on retail property values in Detroit.[409]

D. Summary of Cotti's Findings

As noted earlier, the study by Cotti is the most comprehensive study to date on the local-level economic impacts of casino existence. Cotti used a comprehensive dataset that included economic variables on all US counties (but excluded Nevada and New Jersey from the analysis) to estimate the impact of the existence of casinos on employment and wages at the county level.

The results show that casinos have a modest positive impact on county-level employment when all industries are considered. The impacts on wages were even smaller. The basic model indicated an 8.2 percent effect of casinos on employment, but only a 0.79 percent wage effect. However, once the county-level trends are controlled for, these casino impacts fall almost by half.

If we consider the Leisure and Hospitality supersector only, which includes casinos and casino hotels, and is perhaps the sector most likely to be impacted by the introduction of a new casino, the results indicate that, after controlling for trends, there is a positive employment effect of about 5.33 percent, while the earnings effect is 3.12 percent.

When the counties analyzed are limited to counties in casino states only, the casino impacts are shown to be milder, both overall, and for the Leisure and Hospitality supersector specifically.

When counties are separated by population, the results show the greatest casino impacts on lower-population (e.g., rural) counties, with much more modest impacts in more populous (e.g., urban) counties. Since most of the counties in Florida under consideration for casino expansion or the addition of machine games at existing pari-mutuels are relatively large population counties, we primarily rely on his estimates shown in Figure 119 above (employment effect of +3.61 percent; wage effect of +2.28 percent).

[409] Jonathan A. Wiley and Douglas M. Walker, "Casino Revenues and Retail Property Values: The Detroit Case," *Journal of Real Estate Finance and Economics*, Volume 42, 2011, p. 99-114.

IV. Data and Counties for Analysis

The plan for the analysis of Florida requires that we use information from the experiences of other counties in the United States to inform our predictions of the likely casino effects in Florida. The best foundation for the analysis is to utilize the Cotti results, since they are derived from the most comprehensive study published to date, using the most current dataset on casinos of which we are aware. Since the results in that study were based on data from all US counties, and because the analysis included data on the introduction and existence of casinos at the county level, the estimated casino effects from the Cotti study can be applied to data on Florida counties to predict likely impacts. An additional advantage of using the Cotti estimates whenever possible is that they were produced through regression analysis, which controls for various demographic and economic variables that certainly impact the employment and wages at the county-level.

As discussed above, Cotti primarily analyzed employment and wages. In addition to these two variables, we analyze the number of establishments at the county level. This will help us to analyze the changes in local business structure, in particular, the total number of businesses operating in the county, as it relates to the opening and operation of a casino in the county.

The Cotti analysis focused on two aggregated industry sectors: "All Industries" and "Leisure and Hospitality." We use Cotti's estimates in forecasting Florida county values for those, for both prospective stand-alone casino counties and for pari-mutuel counties that could add slot machines (e.g., racinos). The variables to which we apply the Cotti estimates are employment and average weekly wages.

A note on terminology used in this report: We routinely refer to pari-mutuels which may add slot machines or other EGS as a result of a change in Florida gambling law as "racinos." We do this for efficiency in wording even though we acknowledge that racetracks are not the only pari-mutuels in the state. Destination resort casinos or other stand-alone casinos are referred to simply as "casinos."

In order to project the number of establishments, for both prospective casino counties and for racinos we utilize the trend data from a group of peer counties selected to simulate what the effects would be in Florida. In short, peer trend data will be utilized in cases where we do not have Cotti estimates available (i.e., for number of establishments in "All Industries" and "Leisure and Hospitality"; and for all variables in the "Other Service" sector.)

A. Data

Spectrum collected data on the "number employed," "average weekly wages," and "number of establishments," for two supersectors, which are based on the North American Industrial Coding System (NAICS). The "supersectors" on which we collected data are "Leisure and Hospitality" and "Other Services." We also collected data on the aggregated sector, "All Industries." The data run from the first quarter of 2002 (2002.1) through the fourth quarter of 2012

(2012.4). These data come from the Quarterly Census of Employment and Wages (QCEW) of the US Bureau of Labor Statistics.[410] This is the same data source used in Cotti's study.

The analysis of the data for Leisure and Hospitality industries will give us a narrow picture of how casinos (and the related hotel, restaurant, and bar businesses in destination resort casinos) affect the industries that most directly compete with casinos. The analysis of "Other Services" will provide information on whether there appears to be a more general "substitution effect" caused by casinos, onto sectors not believed to be directly related to the casino industry. The analysis of "All Industries" will provide the most general picture of the economic impact of casinos on the local (county) economy.

Data Summary:	Level:	County
	Sectors:	All-Industries Leisure & Hospitality Other Services
	Variables:	Number of people employed Average weekly wages Number of [business] establishments
	Frequency:	Quarterly, 2002.1 through 2012.4

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages

Next, we provide basic information about the data.

1. Leisure and Hospitality

The Leisure and Hospitality supersector includes data from two sectors: Arts, Entertainment, and Recreation (NAICS 71), and Accommodation and Food Service (NAICS 72).

Arts, Entertainment, and Recreation is described by the NAICS:

> …a wide range of establishments that operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of their patrons. This sector comprises (1) establishments that are involved in producing, promoting, or participating in live performances, events, or exhibits intended for public viewing; (2) establishments that preserve and exhibit objects and sites of historical, cultural, or educational interest; and (3) establishments that operate facilities or provide services that enable patrons to participate in recreational activities or pursue amusement, hobby and leisure-time interests.[411]

[410] www.bls.gov/cew/

[411] http://www.bls.gov/iag/tgs/iag71.htm (Accessed August 21, 2013)

The subsectors included are: NAICS 711 (Performing arts, spectator sports, and related industries); 712 (Museums, historical sites, and similar institutions), and 713 (Amusement, gambling, and recreational industries).

Accommodation and Food Service is described by the NAICS:

> …establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption. The sector includes both accommodation and food services establishments because the two activities are often combined at the same establishment.[412]

The subsectors included in Accommodation and Food Service include: NAICS 721 (Accommodation) and 722 (Food Services and Drinking Places).

Since gambling is included in the Arts, Entertainment, and Recreation sector, the analysis of county-level data for this classification allows us to estimate the extent to which there is a "substitution effect" or "cannibalization" among different industries that might be expected to compete with the casino or other gambling industries. That is, a positive trend in employment and/or wages in the Arts, Entertainment, and Recreation sector would suggest that casinos create a net positive impact on employment. Whereas a negative impact from the introduction of casinos would imply that the jobs created at casinos are more than offset by job losses in other entertainment/recreation industries.

Another concern with the introduction of casinos is based on the fact that destination resort casinos typically have large hotels and a variety of bars and restaurants in close proximity of the casino floor. This may cause casino patrons to visit the different businesses within the casino resort, causing a loss in business to competing restaurants, bars, and hotels. To the extent that the hotels, bars, and restaurants associated with casinos "cannibalize" similar nearby businesses, we might expect the net effect of casinos to be negative on employment and wages. However, if casinos are complementary to other related businesses, say by some tourists leaving the casino property to see the surrounding city, then the casino's tourism draw may cause a net increase in employment and wages.

It should be noted that Cotti analyzed the Entertainment and Hospitality sectors separately. However, we aggregate the two into the "supersector," the combined data for which is provided by the QCEW. One argument for aggregating the sectors is that casino hotels are included in the Hospitality sector, while the casino operations are included in the Entertainment sector. Rather than splitting the two sectors, we believe it more appropriate to keep the industries combined, as they are in operation. Still, our analysis provides information on how overall employment in the entertainment and hospitality sectors (combined) will change, including the employment at the casino resorts themselves.

[412] http://www.bls.gov/iag/tgs/iag72.htm (Accessed August 21, 2013)

In summary, the analysis of the impact of casinos opening on employment, wages, and number of establishments in the Arts, Entertainment, and Recreation and in Accommodation and Food Service (i.e., the Leisure and Hospitality supersector) will give us a general understanding of the impact of casinos on the local economy.

2. Other Services

We also examine the "Other Services" classification for Florida counties, which is a part of the service-providing industries supersector group. Other Services (which excludes public administration) includes firms that are not included in other service sector classifications. The NAICS describes Other Services:

> Establishments in this sector are primarily engaged in activities, such as equipment and machinery repairing, promoting or administering religious activities, grantmaking, advocacy, and providing dry cleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services.[413]

One rationale for choosing this sector, rather than a more "focused" one (such as Construction) is that it enables us to examine whether there would be an impact on a wide variety of firm types, as a group. Therefore, it allows us to measure a more general casino effect on firms that might not be expected to have either a direct substitute or complementary relationship to casinos, but that are still service sector firms. *A priori* we would not expect any relationship between "Other Services" and the casino/racino industry.

3. All Industries

Our last group is the most inclusive possible, "All Industries" in the county. Using the county-level data on all employment, wages, and number of firms, will give us the most general picture of the impacts casinos have on the local economy. If there is a significant "cannibalization" or "substitution" effect from the opening of a casino, then we should see either a neutral or negative impact on employment and wages, as the casinos cause other jobs in the county to disappear to an extent that more-than-offsets the jobs created at the casino. Cotti also analyzed All Industries as his most aggregated sector.

B. Counties for Analysis

Our analysis for this study is focused on county-level economic variables and their likely response to the introduction of a stand-alone casino resort, as well as the response in other counties to the addition of slot machines to existing pari-mutuel gambling facilities, such as race tracks (i.e., racinos). We select several counties for analysis, based on (1) the counties that are perhaps most likely to be considered as hosts for new commercial destination resort casinos, and (2) counties in

[413] http://www.bls.gov/iag/tgs/iag81.htm (Accessed August 21, 2013)

which there are currently-operating pari-mutuel gaming facilities. We discuss the Florida counties in turn, as well as the peer counties to be used as a part of the analysis.

1. Casino Counties

We must obviously speculate as to which counties are most likely to be hosts for new casinos if they were legalized in the state. However, the predicted impacts on the relatively aggregated industry classifications are not likely to be extremely sensitive to which particular counties host new casinos.

The following table illustrates casinos currently operating in Florida. We also list machine and table game data from casinocity.com, as well as the county and opening date of each casino.

Figure 122: Florida counties with Native American casinos

Casino Name	County	Opening Date	Gaming Machines	Table & Poker Games
Big Cypress Casino	Hendry	April 2012	36	--
Seminole Casino Coconut Creek	Broward	2000	2,400	95
Seminole Casino Hollywood	Broward	Dec. 1979	1,150	32
Seminole Hard Rock Hotel & Casino Hollywood	Broward	May 2004	2,500	135
Seminole Casino Immokalee	Collier	1994	1,200	44
Miccosukee Resort & Gaming Center	Miami-Dade	1999	2,000	32
Seminole Casino Brighton	Okeechobee	1980	380	7
Seminole Hard Rock Hotel & Casino Tampa	Hillsborough	Mar. 2004	5,008	185

Source: www.casinocity.com (accessed August 22, 2013), Spectrum Gaming Group.

Since Cotti's analysis examines the impact of a casino operating in a county, we might be inclined to estimate changes in wages and employment only for counties that currently do not have operating casinos of any type. Then we would be applying Cotti's estimates in a way most consistent with his analysis.

At the same time, however, we could argue that we should consider counties in which there is an existing Native American casino, since a new casino is likely to create a novelty effect that is as big (or even bigger) as when the existing casino opened in the county. One could argue that this would be the more reasonable assumption, since Florida already has a well-developed, widespread gambling industry. There is still likely to be a large novelty effect from new casinos.

We must also consider that a new casino being built in a county with an existing Native American casino may cannibalize the competition, at least to an extent. This may suggest that the impact of a new casino should perhaps be less than the impacts estimated by Cotti. Alternatively, a new casino in an area may create a positive clustering effect. That is, it is possible that two casinos located near each other may collectively draw more customers than the sum of the individual casinos had they been located further apart. This is certainly the case in markets like Las Vegas, Biloxi/Gulfport, and Atlantic City. Although the casinos must compete with each other,

there is also a positive agglomeration effect, as tourists are likely to be attracted to an area simply because it has more entertainment (i.e., casino) options to choose from.

There is probably some merit to all of the above scenarios; which of the effects is strongest is difficult to determine. Therefore, we simply use Cotti's estimates as they are, assuming that the impacts of existing casinos have died-out. This assumption is somewhat consistent with Cotti's findings regarding the economic impacts of casinos analyzed based on lag periods since the casinos' introduction. But the possible scenarios described here should be kept in mind when interpreting the empirical results below. We effectively assume that these various effects roughly offset each other.

Based on Spectrum's familiarity with Florida, the current and recent political climate in Florida, and the discussion above, we choose the following counties for our primary analysis: Broward, Hillsborough, Miami-Dade, Orange.

Broward, Miami-Dade, and Hillsborough counties all have existing Native American casinos and so the addition of a commercial casino in these counties may be less controversial than in other counties in Florida.[414] Orange County is home to Walt Disney World, and could be considered as a host county for a casino resort, even though there would certainly be opposition to that.

Cotti's study found little or no impact on employment and wages in counties adjacent to casino counties. For this reason, we limit our analysis to above-listed counties in Florida and do not attempt to model neighboring county impacts.

2. Pari-Mutuel Counties

In Part 1B of this study (discussion of Scenario G), the different counties that currently host pari-mutuels were listed in a table, reproduced below. The table also shows the county's population ranking, by third, relative to 3,100+ counties in the United States. As shown, all Florida pari-mutuel counties except Hamilton, Jefferson, and Washington, are in the top third of most populous counties. This is important to note because it will determine which of the Cotti estimates are used to forecast the economic impact of introducing machine games at pari-mutuels. It will also influence our choice of peer counties to use.

[414] These counties also have pari-mutuels, such as greyhound or horse racetracks, many of which include other forms of gambling, such as EGMs.

Figure 123: Florida's non-gaming pari-mutuel licenses

Property	City	County	Population Ranking (by thirds)
Melbourne Greyhound Park, LLC	Melbourne	Brevard	Top
Orange Park Kennel Club, Inc.	Jacksonville	Clay	Top
Jacksonville Greyhound Racing, Inc.	Jacksonville	Duval	Top
Pensacola Greyhound Racing, LLP	Pensacola	Escambia	Top
Gretna Racing, LLC	Gretna	Gadsden	Top
Hamilton Jai Alai and Poker	Jasper	Hamilton	Bottom
Jefferson County Kennel Club, Inc.	Monticello	Jefferson	Bottom
Naples Fort Myers Greyhound Track	Bonita Springs	Lee	Top
Ocala Poker & Jai-Alai	Orange Lake	Marion	Top
Palm Beach Kennel Club Poker Room	West Palm Beach	Palm Beach	Top
Derby Lane	Saint Petersburg	Pinellas	Top
Sarasota Kennel Club, Inc.	Sarasota	Sarasota	Top
Orlando Jai-Alai & Race Book	Casselberry	Seminole	Top
Sanford-Orlando Kennel Club	Longwood	Seminole	Top
St. Johns Greyhound Park (Bayard Raceways, Inc.)	Jacksonville	St. Johns	Top
Fort Pierce Jai-Alai	Fort Pierce	St. Lucie	Top
Daytona Beach Kennel Club, Inc.	Daytona Beach	Volusia	Top
Ebro Greyhound Park	Ebro	Washington	Middle

Source: Florida Department of Business and Professional Regulation, Division of Pari-Mutuel Wagering.
County population estimates from US Census,
http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk (accessed August 26, 2013)

Omitted from the table are counties that are considered to be prospective casino counties, as discussed above. Those counties will be treated as casino counties, not as pari-mutuel counties in this analysis. However, it should be recognized that there could be a larger economic impact if both a casino is opened and slot machines are added to existing pari-mutuels in the county. Both could certainly spur economic development equally. At the same time, we should acknowledge that pari-mutuel casinos and stand-alone casino likely substitute for each other, from the consumer's perspective. One can easily increase the projected effect in casino and pari-mutuel counties to account for the effect of both, but we focus our analysis on the casinos in the "casino counties" discussed above.

Since all of the counties (except three) are ranked in the top third most populous counties in the United States, the estimated economic impact of introducing slot machines will be the same for those counties, in terms of the magnitude of change. The estimated impacts will be larger, in percentage terms, for those counties that have smaller populations, as found in Cotti's study.

3. Peer Counties

If we had complete data on all US counties, we could follow a systematic methodology for choosing peer counties for our analysis of potential casino and pari-mutuel counties in Florida. However, since we do not have such data that also includes up-to-date casino existence data, we must choose peer counties "manually." The most important criteria to consider, of course, is that the county must have had a casino open within the past decade. This way we will be able to

compare data before and after casino opening, in order to project impacts onto Florida's prospective casino counties.

Other variables that we could consider include population (or population density), per capita income, and unemployment. It is somewhat difficult to find exact matches to serve as peer counties, so we opt to choose a small group of counties whose averages will serve as the peer for the Florida casino and pari-mutuel counties. Peer counties were chosen based primarily upon the variable of population size, followed by the introduction of casino gaming either within or directly adjacent to the county in question and completely within the time window of our data set of 44 quarterly periods (2002-2012). In the case of San Diego County, a robust tourism component of the economy argued for inclusion, despite the fact that small scale Native American gaming had begun prior to our ten year time horizon.

Having a small group of peer counties, and using their average casino effects, reduces the chance that our analysis relies on an outlier. We view the existence of a casino, and a similar population to be the two key criteria for choosing peer counties. We view the similarity of population to be critical, as population has been shown to be a key determinant of the relative impacts of casino introduction. In addition, 19 of the 22 included as casino or pari-mutuel counties in the state have "large" populations by Cotti's categorization.

The peer counties chosen are shown below along with their population and casinos.

Figure 124: Peer counties for analysis

County	State	Population	Casino Opening Date
Allegheny County	Pennsylvania	1,229,338	2007
Philadelphia	Pennsylvania	1,547,607	2004
San Diego	California	3,177,063	2002
Westchester	New York	961,670	2006

Source: Spectrum Gaming Group

All of the peer counties are in the top 3 percent populous counties in the United States. This size is consistent with all of the casino counties and most of the pari-mutuel counties in Florida. Obviously each county has unique economic and demographic characteristics, but our primary goal was choosing large counties that had legalized casinos at some point in the time period.[415]

Numerous pari-mutuel racetracks have introduced slot machines over the past decade. Some of those have gone on to introduce table games (either live or electronic), and in many cases these "racinos" are very similar in size and scope to stand-alone casino resorts. Because most of the pari-mutuels that could be allowed to introduce slot machines in Florida are in relatively highly

[415] There are more refined methodologies for choosing ideal peer counties, however, such methods require an enormous amount of data on all counties. We do not have such a database. Nevertheless, we believe the averaging of the peer county effects will provide a very good foundation for projecting future impacts.

populated counties, we treat the projection of economic impacts as the same as for the casino counties. For pari-mutuels then, we can use the same peer counties as we chose for the casino counties, above. In order to address the middle- and bottom-population counties in the sample, we adjust the projected estimates based on the difference in effects estimated by Cotti. (This is explained in more detail below.)

The peer counties for these casino counties will provide the estimated casino effect for the number of establishments (for "All Industries" and "Leisure and Hospitality" sectors), as well as the estimated employment, average weekly wage, and number of establishments in the "Other Services" sector. That is, the peer counties provide the estimated impacts on any variables/industry sectors that Cotti did not estimate in his study. Details on the analysis are discussed in a section below.

A caveat that should be noted is that the projections based on Cotti's estimated results should be given greater confidence than estimates based on the experience in peer counties. This is because Cotti's estimates are based on a regression analysis that controls for demographic and various economic variables. The projections based on peer counties come from the trends before and after the introduction of casinos. While these trends are based on the overall experience within the county, the estimated casino impact does not control for other demographic and economic factors. Nevertheless, these are the best estimates on which to project the potential casino effect, given we do not have complete demographic and economic data on US counties from which to base the projections.

V. Overview of Analysis

Above we summarized the data we are using and the counties that we are analyzing for this part of the report. Next we describe the analysis, which focuses on the likely impacts of casino introduction/expansion in Florida counties is based on past trends in our variables (number employed, average weekly wages, and number of establishments), the estimated casino impacts from Cotti's analysis, and the effect of casino introduction in non-Florida peer counties.

The analysis is organized into two parts. We first discuss the projected effects of introducing casinos in the four counties discussed above: Broward, Hillsborough, Miami-Dade, and Orange. Then we discuss the projections for the pari-mutuel counties. For our projections we assume that all of the counties would introduce slot machines at their existing pari-mutuels. The economic impacts of creating a "racino" at an existing race track are assumed to be the same as the introduction of a stand-along casino.[416]

We analyze changes in three industry groups: "All Industries," "Leisure & Hospitality," and "Other Services". For each industry, we provide projections on employment, average weekly wages, and number of establishments. The projections for employment and wages come from Cotti's study, for "all industries" and "leisure & hospitality," and from peer county estimates for the remaining variables.

A. Estimated Casino Effects from Cotti's Estimates

The key results from Cotti's study that are relevant for our projections are those related to "top third" populous county. Below we reproduce Table X from above, which shows Cotti's estimated casino impacts on employment and wages for highly populated counties.

Figure 125: Estimated top-third-population county effects of casinos

Sector	Employment Effect	Earnings Effect
All Industries	+ 0.28%	- 0.12%
Entertainment (NAICS 71)	+17.6%	+ 7.89%
Hospitality (NAICS 72)	+ 0.65%	+ 1.1%
Weighted Average of Entertainment and Hospitality Sectors	*+ 3.61%*	*+ 2.28%*

Source: Cotti (2008, p. 34). Weighted average calculations by Walker, Spectrum Gaming Group.

In projecting the impacts at the most aggregate level ("All Industries"), we note that casinos have a statistically insignificant impact on both employment and wages. That is, statistically, they have no impact on these variables. However, if we look at the entertainment and hospitality sectors,

[416] This assumption is reasonable, given that Cotti's estimated impacts are based on the experiences of casinos large and small throughout the United States, and as a result, represent impacts from the average casino in the country.

which we combine in our analysis, the result of which is the Leisure and Hospitality supersector, we find statistically significant impacts on both employment and earnings.

In order to project the casino effect into the future, we calculate the growth rate in each variable over the 2002 – 2012 period. This is the trend that we project the variable will follow into the future.[417] Recall that Cotti's estimated casino effects relate to the "existence" of a casino in the county. That is, his estimated effects are for counties with a casino, relative to those without. In projecting future values of employment and wages, then, we adjust upward the variable's trend by Cotti's estimated impact.

Since the key change of interest is the one-time impact of introducing a casino in the county (i.e., this is the effect provided in Cotti's estimates), the length of time over which we project future values is of relatively little concern. For all models, we assume casinos are introduced in the first quarter of 2013, and we project values out through the end of 2014, giving two full years of quarterly projections. The 2013 opening date is chosen so that the estimated casino effect is added to *actual data* (which ends in 2012Q4) and not to a projected value.

It is worth noting that the projection time of 2 years is arbitrary, but it is also inconsequential. What is relevant is the estimated "jump" in the data series as a result of the casino opening. The actual date a casino opens would not markedly change the projected values. The no-casino and casino projections would continue to move into the future in the same pattern. In the results section, we provide an overview of the estimated number of jobs and change in wage rate attributable to casinos, as of the 2014, quarter 4 projection.

It will be noted in the graphical presentations that there is a strong seasonal component to these series. This probably is related, to an extent, on the seasonality of tourism in Florida. In order to account for the seasonal difference in the data, we use same-quarter projections. That is, the values for the second quarter of 2013 are projected based on second quarter values from the past, along with the overall estimated trend. Thus, the projections reflect the actual seasonality of the past data.

B. Estimated Casino Effects from Peer County Estimates

We utilize data from the peer counties discussed above to project variables for which Cotti did not estimate. We use peer counties to project future values for "number of establishments" in "All industries," "Leisure & hospitality," and "Other services." We also use peer counties for the projection of employment and wage changes in "Other services."

[417] We analyzed what would happen when different trends are calculated, for example, omitting the effects of the 2007-09 recession. What we found was that the recession effect (negative) was offset by the higher than normal growth rate after the recession (positive). Including all periods seems to be the most reasonable and a conservative way to estimate the trend.

The projected casino and "racino" impacts using peer county data are calculated differently from the Cotti estimates. This is because we are not performing a regression analysis on the data, and so we opt for the simplest way to estimate the casino/racino impact, given we have limited data. We estimate the casino impact from casinos using peer county data before and after the introduction of casinos. Specifically, we take the difference in values from one year before to one year after the opening of the casino. The difference is the estimated casino effect. We divide the difference by the pre-casino value to derive the estimated percentage change in the variable due to the casino or racino. The calculations for the base peer effects are shown in the figure below. Given that we have 2012Q4 data, we can provide an estimate of what each variable would have been in that quarter had the racino being operating in that period.

Figure 126: Estimated casino effects based on peer counties

	All Industries	Leisure & Hospitality	Other Services
Number of Establishments			
1 Yr Before Opening	43,556	3,881	7,225
1 Yr After Opening	45,580	4,104	7,859
Change	2,024	223	634
% Change	***4.65%***	***5.7%***	***8.78%***
Number Employed			
1 Yr Before Opening	626,440	69,865	28,647
1 Yr After Opening	643,288	74,502	29,806
Change	16,848	4,637	1,159
% Change	***2.69%***	***6.64%***	***4.05%***
Cotti Estimated Effects	***0.28%***	***3.61%***	***n/a***
Average Weekly Wages			
1 Yr Before Opening	$924	$408	$514
1 Yr After Opening	$989	$446	$566
Change	$ 65	$ 38	$ 52
% Change	***7.0%***	***9.3%***	***10.1%***
Cotti Estimated Effects	***-0.12%***	***2.28%***	***n/a***

Source: Spectrum Gaming Group

There are several points to emphasize about the above calculations. First, as noted above, we are less confident in predictions based on this method. However, given the available data, this methodology may be the best available by which to estimate the casino impact. Nevertheless, it should be understood that it does not account for various economic and demographic factors that could explain trends in the data. Also, this method implicitly assumes that the addition of the casino is the primary driver of any increase in employment, wages, etc., above the pre-casino level.

One check of the estimated effects based on the peer counties is to compare these to analogous estimates from Cotti. In the preceding figure we have inserted Cotti's estimated effects

from "large counties" for comparison with the estimated peer effects. The estimated peer effects are all significantly larger than Cotti's estimates. We posit a rough calibration of the peer county estimated effects to make them more consistent with Cotti's estimated effects.[418] Unfortunately, there is no purely scientific way to determine the appropriate adjustment for the estimated impacts. However, based on the figures in the table above on employment and wage effects, a reasonable adjustment would seem to be cutting the estimated peer effects in half. They would still be higher than most of the Cotti effects, but at least this would bring the two sets of estimates more in line than they are originally.[419] Since the peer county estimated impacts for average weekly wages are so far above the Cotti estimates, we divide this value by three. Although we have some information from Cotti's study to adjust the peer county estimates for wages and employment, Cotti provided no information on number of establishments, so our estimate here is likely to least reliable.

C. Estimated Casino Effects

The "calibrated" peer county casino estimates are shown in the figure below, along with the Cotti estimates, where available. These are the estimated casino/racino impacts that we use in our analysis in forecasting the future impacts if Florida changes its gambling laws to allow stand-alone casinos and slot machines at racetracks.

It should be emphasized that these effects are "level" effects, which would be applied to a trend at a single point of time (e.g., casino opening). The estimates do not affect the variables' trend slopes (i.e., the rate at which they increase after the initial change in level.

Figure 127: Estimated casino effects, calibrated with Cotti's estimates

Sector	No. of Establishments	No. Employed	Avg. Weekly Wages
All Industries	+ 2.32%	+ 0.28%	- 0.12%
Leisure & Hospitality	+ 2.85%	+ 3.61%	+ 2.28%
Other Services	+ 4.39%	+ 2.03%	+ 3.36%

Source: Spectrum Gaming Group, Cotti (2008). Note: Shaded cells represent Cotti estimates.

D. Unemployment Rates

At the county level overall, as shown by Cotti's nationwide estimates on employment in all industries (shown above), there are no statistically significant impacts on overall employment.

[418] It should be noted that Cotti's original estimated effects, prior to adjustment for trends and division of counties by population group, were much larger. For example, his initial casino employment effect on All Industries was 8.2 percent. This variation in estimates confirms that the estimated effects are very sensitive to the method of estimation. This should be kept in mind when interpreting the results in this report.

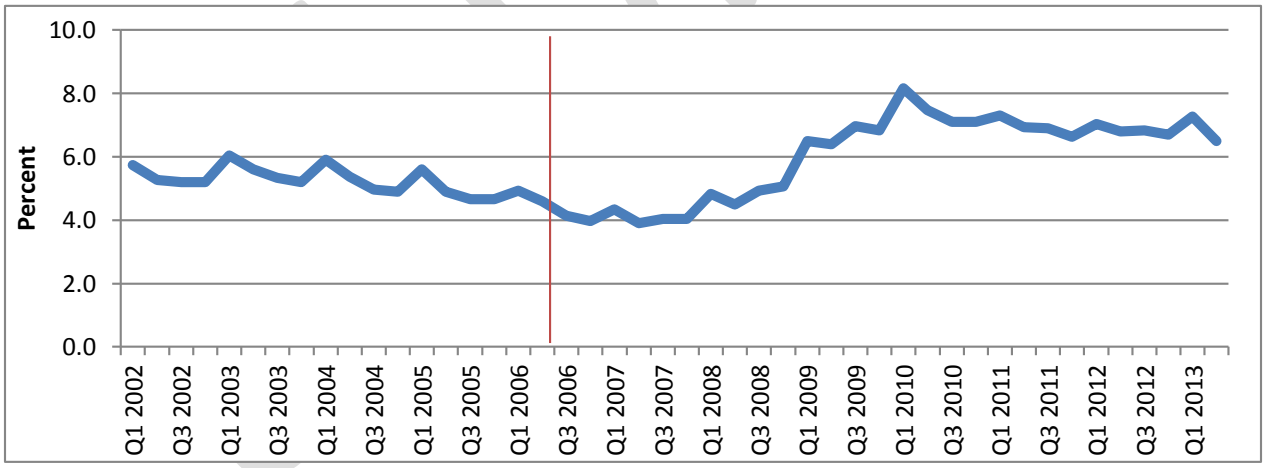
[419] Obviously, this is a somewhat arbitrary adjustment. But it is being made in an effort to be conservative and not over-state the likely impacts of casinos. One of the key reasons to believe that the estimated effects based on peer counties are overstating the actual casino effects is that we do not account for inflation, whereas the Cotti estimates do. Our goal is to provide a reasonable calibration of estimates because we are forced to use estimated impacts from different sources.

This suggests that the introduction of casinos will have little or no impact on the unemployment rate for individual counties. However, it should be noted that casinos may employ individuals from outside the county. So there is not necessarily a straightforward relationship between the employment effect within a county and the unemployment rate. However, it is fairly clear from the empirical evidence that since the casino introduction has a minimal net effect on employment, and no measurable impact on employment in neighboring counties[420], then it is unlikely that casinos would markedly affect the unemployment rate, especially in large population counties.

When we examine the unemployment rate for the peer counties utilized in the analysis, we find no indication that the casino opening changes the existing trend in unemployment. In the figures below we present the quarterly county-level unemployment rate. We also note the date of the first casino opening in the county.[421]

Nationally, unemployment was on the decline in the 2000s, and was below 5 percent through 2007. Of course, the recession began in December 2007, lasting through mid-2009, which explains the sharp increase in unemployment in the peer county graphs. If the casino opening had a strong impact on the unemployment rate in the county, we should see a clear change in the slope of the unemployment line immediately following the casino opening. None of the graphs shows such an effect.

Figure 128: Quarterly unemployment rate in Allegheny County, PA (casino opening: 2006 Q2)

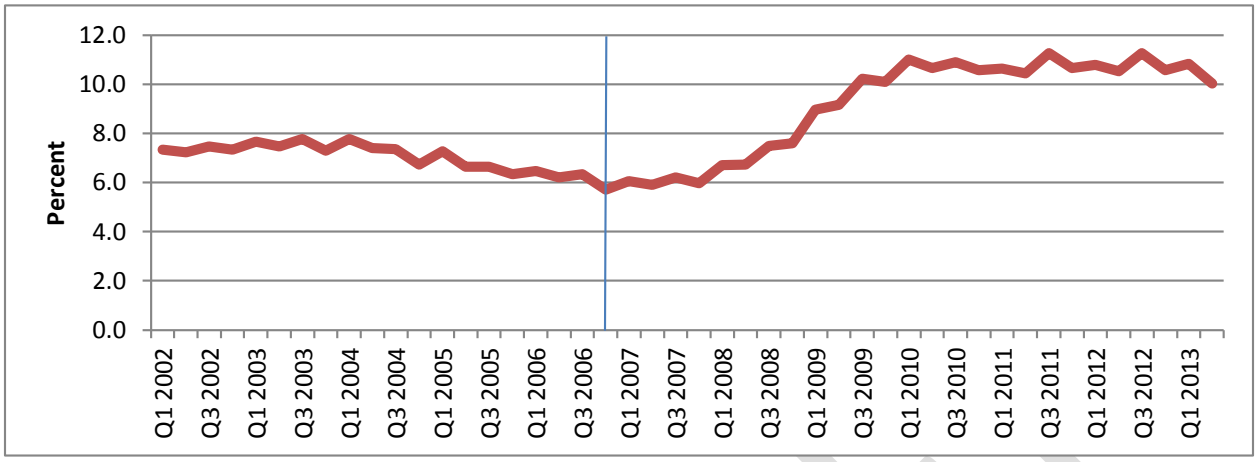


Source: Bureau of Labor Statistics (http://data.bls.gov/cgi-bin/dsrv?la)

[420] Cotti (2008).

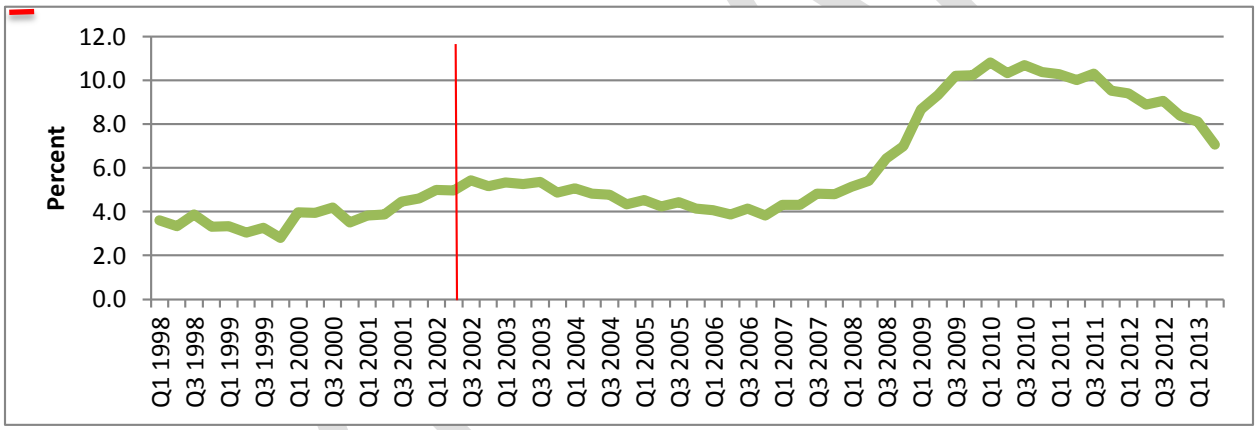
[421] The exception is for San Diego County, which had some small casinos operating prior to the date indicated.

Figure 129: Quarterly unemployment rate in Philadelphia County, PA (casino opening: 2006 Q4)



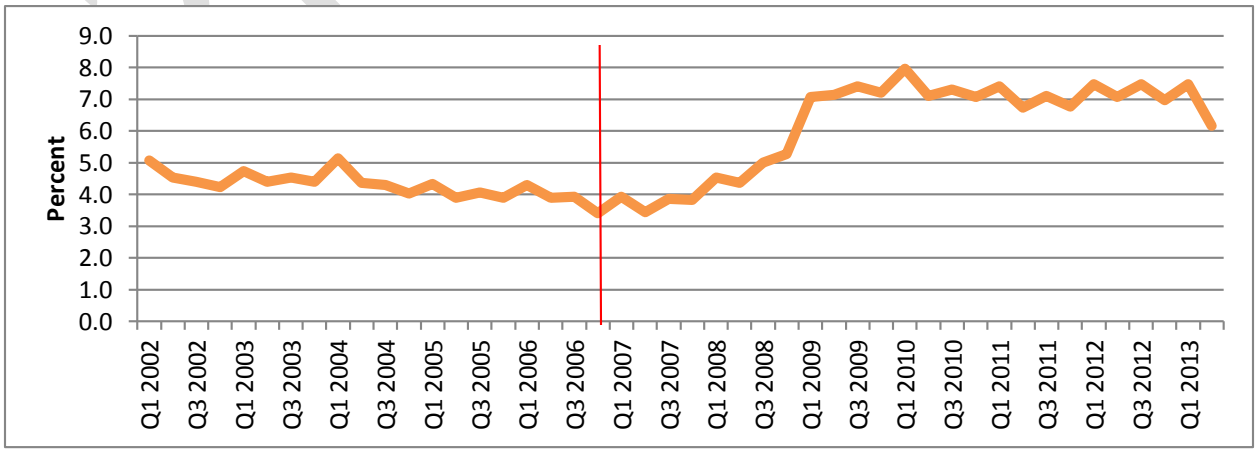
Source: Bureau of Labor Statistics (http://data.bls.gov/cgi-bin/dsrv?la)

Figure 130: Quarterly unemployment rate in San Diego County, CA (casino opening 2002 Q2)



Source: Bureau of Labor Statistics (http://data.bls.gov/cgi-bin/dsrv?la)

Figure 131: Quarterly unemployment rate in Westchester County, NY (casino opening 2006 Q4)



Source: Bureau of Labor Statistics (http://data.bls.gov/cgi-bin/dsrv?la)

The peer counties on which we have data do not show a casino effect on the unemployment rate. In addition, the county-level unemployment rate cannot be forecast without some way of controlling for migration across county lines, as well as changes in the labor force. These complications also make employment a more valuable indicator of the "big employment picture" than the unemployment rate.

VI. Results

The results of the analysis are presented in the subsections below. The estimated impacts from the introduction of casinos or the addition of slot machines (or EGMs) at existing pari-mutuels in the state are treated as similar, with respect to the magnitude of gambling expansion. That is, pari-mutuels are assumed to add enough machine games that the resulting "racino" is similar in size to a stand-alone casino resort. This assumption is not likely to markedly affect the results, however. Recall that Cotti's estimated casino impact on county-level data represent the most comprehensive estimated casino effects published in the literature. Nevertheless, they do have limitations. For example, the estimated effects are based on a regression analysis that includes counties of various sizes from across the United States, which host casinos of various sizes and in various numbers. The resulting estimates are thus for the "average" casino county. The data and methodology do not allow for very precise predictions of the variables. Nevertheless, we believe the estimates provided are reasonable, given the data.

A. Pari-Mutuel Counties

We begin by presenting the estimated impacts of introducing slot machines (or EGMs) at existing pari-mutuels in the state. As noted above we utilize the peer counties discussed above in order to estimate the impacts on variables for which we do not have estimates from the Cotti study. Since we are not analyzing specific the economic conditions for each of the pari-mutuel counties separately, for the sake of brevity, we present the estimated results in a table that lists the actual values for each variable, as of 2012Q4. We then show what the value would be in 2013Q1, assuming the racino was open in that period (i.e., slot machines were added to the existing pari-mutuel in the county). All of the estimates are based on the casino impacts shown in the figure above.

1. All Industries

Cotti estimated statistically insignificant changes to the amount of employment and average weekly wages when "All Industries" in the county are considered. Therefore, we do not show results for employment and average weekly wages for "All Industries." The addition of slots at pari-mutuels is not expected to impact these variables.

There are three exceptions to these results. Referring back to Figures 120 and 121, we see that middle- and small-population counties are estimated to see larger casino/racino impacts. Hamilton and Jefferson Counties are considered "small" counties (indicated by ** in the table below), so the estimated employment impact from a racino in those counties is 10.5 percent for "All Industries," and for wages it is 1.84 percent. Washington County is a middle-sized county (indicated by * in the table below), and the estimated employment effect of adding a racino there is 2.4 percent; the wage effect is essentially zero, however (0.1 percent). The reported effects in

the subsequent tables (for the Leisure and Hospitality and Other Services sectors) probably modestly understate the true impact of adding slots in those counties.

In the figure below we show the estimated effect of adding machines at pari-mutuels on the number of establishments in each county. As noted above, the relatively smaller counties would likely see impacts that are larger than those listed in the table, but we have no way of precisely estimating the additional number.

Figure 132: Pari-mutuel counties, all industries: number of establishments with racino added

County	Property	2012 No. Establ.	2012 Est. w/Racino	Change
Brevard	Melbourne Greyhound Park, LLC	14,544	14,881	337
Clay	Orange Park Kennel Club, Inc.	4,140	4,236	96
Duval	Jacksonville Greyhound Racing, Inc.	27,488	28,126	638
Escambia	Pensacola Greyhound Racing, LLP	8,018	8,204	186
Gadsden	Gretna Racing, LLC	819	838	19
Hamilton**	Hamilton Jai Alai and Poker	227	232	5
Jefferson**	Jefferson County Kennel Club, Inc.	316	323	7
Lee	Naples Fort Myers Greyhound Track	19,092	19,535	443
Marion	Ocala Poker & Jai-Alai	7,983	8,168	185
Palm Beach	Palm Beach Kennel Club Poker Room	50,618	51,792	1,174
Pinellas	Derby Lane	31,070	31,791	721
Sarasota	Sarasota Kennel Club, Inc.	14,665	15,005	340
Seminole	Sanford-Orlando Kennel Club; Orlando Jai-Alai & Race Book	14,012	14,337	325
Seminole	Sanford-Orlando Kennel Club		-	-
St. Johns	St. Johns Greyhound Park (Bayard Raceways)	6,135	6,277	142
St. Lucie	Fort Pierce Jai-Alai	5,721	5,854	133
Volusia	Daytona Beach Kennel Club, Inc.	13,406	13,717	311
Washington*	Ebro Greyhound Park	442	452	10

Source: Spectrum Gaming Group; Bureau of Labor Statistics. Note: County size classifications based on Cotti's: ** = Small-sized county; * = middle-sized county.

The tables illustrates the estimated increase in the number of businesses that would be operating in the county had each pari-mutuel also had slot machines operating at the business. The estimated effect is +2.32 percent.

2. Leisure & Hospitality

Next we illustrate the estimated effect of adding slots to pari-mutuels on the more narrowly-defined leisure and hospitality supersector. It should be noted that the average weekly wages are somewhat lower in this sector because some workers receive tips as a significant amount of their wages, and tips are not included in reported wages.

The three tables that follow show the estimated impact in each county on number of establishments (+2.85 percent), employment (+3.61 percent), and average weekly wages (2.28 percent) in the leisure and hospitality sector.

As shown in the figures, the addition of slots to existing pari-mutuels is expected to provide a modest economic stimulus in the leisure and hospitality sector. The estimated results suggest that slot machines being added to pari-mutuels is more likely to act as a complement, rather than a substitute, to the leisure and hospitality businesses.

Figure 133: Pari-mutuel counties, leisure & hospitality: number of establishments with racino added

County	Property	2012 no. Est.	2012 Est. w/Racino	Change
Brevard	Melbourne Greyhound Park, LLC	1,368	1,407	39
Clay	Orange Park Kennel Club, Inc.	369	380	11
Duval	Jacksonville Greyhound Racing, Inc.	2,531	2,603	72
Escambia	Pensacola Greyhound Racing, LLP	799	822	23
Gadsden	Gretna Racing, LLC	74	76	2
Hamilton	Hamilton Jai Alai and Poker	17	17	0
Jefferson	Jefferson County Kennel Club, Inc.	26	27	1
Lee	Naples Fort Myers Greyhound Track	1,778	1,829	51
Marion	Ocala Poker & Jai-Alai	667	686	19
Palm Beach	Palm Beach Kennel Club Poker Room	3,944	4,056	112
Pinellas	Derby Lane	3,061	3,148	87
Sarasota	Sarasota Kennel Club, Inc.	1,209	1,243	34
Seminole	Sanford-Orlando Kennel Club; Orlando Jai-Alai	1,040	1,070	30
St. Johns	St. Johns Greyhound Park (Bayard Raceways)	653	672	19
St. Lucie	Fort Pierce Jai-Alai	507	521	14
Volusia	Daytona Beach Kennel Club, Inc.	1,394	1,434	40
Washington	Ebro Greyhound Park	44	45	1

Source: Spectrum Gaming Group; Bureau of Labor Statistics

Figure 134: Pari-mutuel counties, leisure & hospitality: number employment with racino added

County	Property	2012 Employment	2012 Est. w/Racino	Change
Brevard	Melbourne Greyhound Park, LLC	22595	23,411	816
Clay	Orange Park Kennel Club, Inc.	6,800	7,045	245
Duval	Jacksonville Greyhound Racing, Inc.	45,891	47,548	1,657
Escambia	Pensacola Greyhound Racing, LLP	14,392	14,912	520
Gadsden	Gretna Racing, LLC	683	708	25
Hamilton**	Hamilton Jai Alai and Poker	131	136	5
Jefferson**	Jefferson County Kennel Club, Inc.	200	207	7
Lee	Naples Fort Myers Greyhound Track	34,120	35,352	1,232
Marion	Ocala Poker & Jai-Alai	10,340	10,713	373
Palm Beach	Palm Beach Kennel Club Poker Room	75,770	78,505	2,735
Pinellas	Derby Lane	48,095	49,831	1,736
Sarasota	Sarasota Kennel Club, Inc.	20,907	21,662	755
Seminole	Sanford-Orlando Kennel Club; Orlando Jai-Alai	17,237	17,859	622
St. Johns	St. Johns Greyhound Park (Bayard Raceways)	11,564	11,981	417
St. Lucie	Fort Pierce Jai-Alai	7,576	7,849	273
Volusia	Daytona Beach Kennel Club, Inc.	21,936	22,728	792
Washington*	Ebro Greyhound Park	572	593	21

Source: Spectrum Gaming Group; Bureau of Labor Statistics; Cotti (2008)

Figure 135: Pari-mutuel counties, leisure & hospitality: average weekly wages with racino added

County	Property	2012 Avg. Wages	2012 Est. W/Racino	Change
Brevard	Melbourne Greyhound Park, LLC	331	339	8
Clay	Orange Park Kennel Club, Inc.	342	350	8
Duval	Jacksonville Greyhound Racing, Inc.	461	472	11
Escambia	Pensacola Greyhound Racing, LLP	308	315	7
Gadsden	Gretna Racing, LLC	285	291	6
Hamilton	Hamilton Jai Alai and Poker	301	308	7
Jefferson	Jefferson County Kennel Club, Inc.	245	251	6
Lee	Naples Fort Myers Greyhound Track	382	391	9
Marion	Ocala Poker & Jai-Alai	319	326	7
Palm Beach	Palm Beach Kennel Club Poker Room	465	476	11
Pinellas	Derby Lane	391	400	9
Sarasota	Sarasota Kennel Club, Inc.	409	418	9
Seminole	Sanford-Orlando Kennel Club; Orlando Jai-Alai	356	364	8
St. Johns	St. Johns Greyhound Park (Bayard Raceways)	391	400	9
St. Lucie	Fort Pierce Jai-Alai	323	330	7
Volusia	Daytona Beach Kennel Club, Inc.	344	352	8
Washington	Ebro Greyhound Park	317	324	7

Source: Spectrum Gaming Group; Bureau of Labor Statistics; Cotti (2008)

3. Other Services

Lastly, we show the estimated impact on of adding machine games to pari-mutuels for the "Other Services" sector. Tables showing the number of establishments (+4.39 percent), number employed (+2.03 percent), and average weekly wages (+3.36 percent) are shown below.

Figure 136: Pari-mutuel counties, other services: number of establishments with racino added

County	Property	2012 No. Establ.	2012 Est. w/Racino	Change
Brevard	Melbourne Greyhound Park, LLC	1,267	1,323	56
Clay	Orange Park Kennel Club, Inc.	371	387	16
Duval	Jacksonville Greyhound Racing, Inc.	2,589	2,703	114
Escambia	Pensacola Greyhound Racing, LLP	720	752	32
Gadsden	Gretna Racing, LLC	71	74	3
Hamilton	Hamilton Jai Alai and Poker	22	23	1
Jefferson	Jefferson County Kennel Club, Inc.	31	32	1
Lee	Naples Fort Myers Greyhound Track	1,585	1,655	70
Marion	Ocala Poker & Jai-Alai	644	672	28
Palm Beach	Palm Beach Kennel Club Poker Room	5,280	5,512	232
Pinellas	Derby Lane	2,729	2,849	120
Sarasota	Sarasota Kennel Club, Inc.	1,304	1,361	57
Seminole	Sanford-Orlando Kennel Club; Orlando Jai-Alai	1,078	1,125	47
St. Johns	St. Johns Greyhound Park (Bayard Raceways)	503	525	22
St. Lucie	Fort Pierce Jai-Alai	463	483	20
Volusia	Daytona Beach Kennel Club, Inc.	1,211	1,264	53
Washington	Ebro Greyhound Park	33	34	1

Source: Spectrum Gaming Group; Bureau of Labor Statistics

Figure 137: Pari-mutuel counties, other services: number employed with racino added

County	Property	2012 Employment	2012 Est. W/Racino	Change
Brevard	Melbourne Greyhound Park, LLC	5,617	5,731	114
Clay	Orange Park Kennel Club, Inc.	1,349	1,376	27
Duval	Jacksonville Greyhound Racing, Inc.	11,618	11,854	236
Escambia	Pensacola Greyhound Racing, LLP	3,660	3,734	74
Gadsden	Gretna Racing, LLC	164	167	3
Hamilton	Hamilton Jai Alai and Poker	65	66	1
Jefferson	Jefferson County Kennel Club, Inc.	140	143	3
Lee	Naples Fort Myers Greyhound Track	6,992	7,134	142
Marion	Ocala Poker & Jai-Alai	2,483	2,533	50
Palm Beach	Palm Beach Kennel Club Poker Room	21,818	22,261	443
Pinellas	Derby Lane	11,547	11,781	234
Sarasota	Sarasota Kennel Club, Inc.	5,418	5,528	110
Seminole	Sanford-Orlando Kennel Club; Orlando	5,603	5,717	114
St. Johns	St. Johns Greyhound Park (Bayard Raceways)	2,682	2,736	54
St. Lucie	Fort Pierce Jai-Alai	2,261	2,307	46
Volusia	Daytona Beach Kennel Club, Inc.	5,135	5,239	104
Washington	Ebro Greyhound Park	77	79	2

Source: Spectrum Gaming Group; Bureau of Labor Statistics; Cotti (2008)

Figure 138: Pari-mutuel counties, other services: average weekly wages with racino added

County	Property	2012 Avg. Wages	2012 Est. w/Racino	Change
Brevard	Melbourne Greyhound Park, LLC	554	573	19
Clay	Orange Park Kennel Club, Inc.	464	480	16
Duval	Jacksonville Greyhound Racing, Inc.	657	679	22
Escambia	Pensacola Greyhound Racing, LLP	616	637	21
Gadsden	Gretna Racing, LLC	488	504	16
Hamilton**	Hamilton Jai Alai and Poker	423	437	14
Jefferson**	Jefferson County Kennel Club, Inc.	380	393	13
Lee	Naples Fort Myers Greyhound Track	570	589	19
Marion	Ocala Poker & Jai-Alai	459	474	15
Palm Beach	Palm Beach Kennel Club Poker Room	647	669	22
Pinellas	Derby Lane	654	676	22
Sarasota	Sarasota Kennel Club, Inc.	574	593	19
Seminole	Sanford-Orlando Kennel Club; Orlando Jai-Alai	749	774	25
St. Johns	St. Johns Greyhound Park (Bayard Raceways)	1,021	1,055	34
St. Lucie	Fort Pierce Jai-Alai	455	470	15
Volusia	Daytona Beach Kennel Club, Inc.	828	856	28
Washington*	Ebro Greyhound Park	495	512	17

Source: Spectrum Gaming Group; Bureau of Labor Statistics; Cotti (2008)

As with the leisure and hospitality supersector, the addition of machine games at existing pari-mutuels is expected to provide modest economic benefits in the "Other Services" sector.

Although we have provided specific forecasts for these variables, it should be noted that each county is unique, as are the pari-mutuel properties. In addition we have no information the sizes of the prospective "racinos." Nevertheless, previous empirical evidence based on US countrywide data suggests that the estimated impacts shown in the tables above are reasonable projections. Furthermore, it would be unlikely that the addition of slot machines to existing pari-mutuels would have starkly different impacts at different locations.

B. Prospective Casino Counties

We now turn to an analysis of the likely effect on various economic variables assuming a single destination resort casino is added to a county. We have previously discussed the assumption about the novelty effect of new casinos, even in counties with existing Native American casinos or pari-mutuels. As noted above, we assume that the introduction of a stand-alone casino has roughly the same impact as a large "racino" development, as analyzed in the previous sub-section.

Next we present the estimated impacts on employment and average wages in Broward, Hillsborough, Miami-Dade, and Orange Counties. These projections utilize the Cotti paper estimates, as well as some estimates from the peer counties. Projections based on peer counties are based on the one-year change in variables around the casino opening. The projections are based on trends in the county's data, and are adjusted for the seasonal component of the trend. The discussion is organized by county.

1. Broward County

Broward County is immediately north of Miami-Dade county, stretching from Hollywood to north of Pompano Beach. As noted earlier, it is a relatively large population county, with a high population density. We provide the projected casino effects for the leisure and hospitality sector (of which the casino would be part), for "Other Services," and for "All Industries."

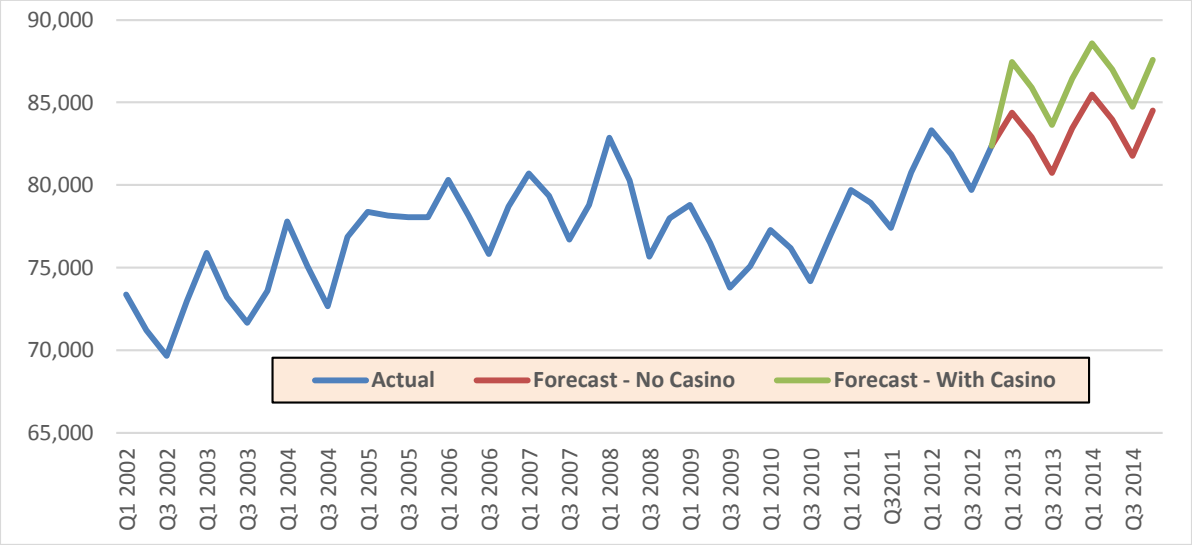
a. Leisure & Hospitality Sector

We first project the employment effect of a casino opening in the first quarter of 2013. The projection is based on Cotti's estimated employment effect for "large" counties, 3.61 percent. The figure below presents the actual data on county-level employment in the leisure and hospitality sector. It also shows the projected values through 2014 for employment if a casino had been introduced at the beginning of 2013, compared to projections assuming the same trend continues in the absence of a casino. The difference between the two projection lines reflects the 3.61 percent estimated casino effect on this variable.

As noted before, there is a lot of seasonal variation in employment that has been incorporated into the projected values. By the end of 2014, it is estimated that there would be an additional 3,051 jobs in this sector, compared to if no casino was introduced. (This value, along

with the analogous value for other counties and sectors will be summarized later in the report.) That is, at the far right of the grey lines, the vertical difference is 3,051 jobs.

Figure 139: Number employed projection in leisure & hospitality sector: Broward County

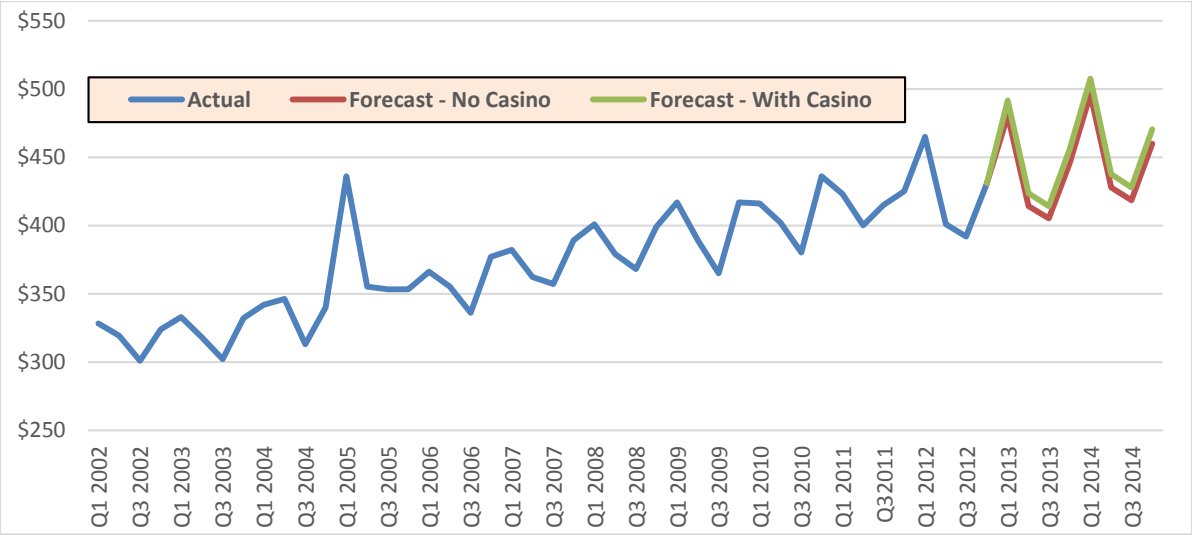


Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

In the chart below we project the effect of casino introduction on average weekly wages in the leisure and hospitality sector for Broward County. The casino effect on average wages is relatively minor, amounting to a difference of $10.49 per week (by the end of 2014). As with the employment effect, average weekly wage effects are based on Cotti's estimate for large population counties.

The relatively insignificant wage effect is perhaps not surprising, as the casino would not be expected to put much upward pressure on wages, especially to the extent unemployment exists in the county, and the casino hires workers from the pool of unemployed workers.

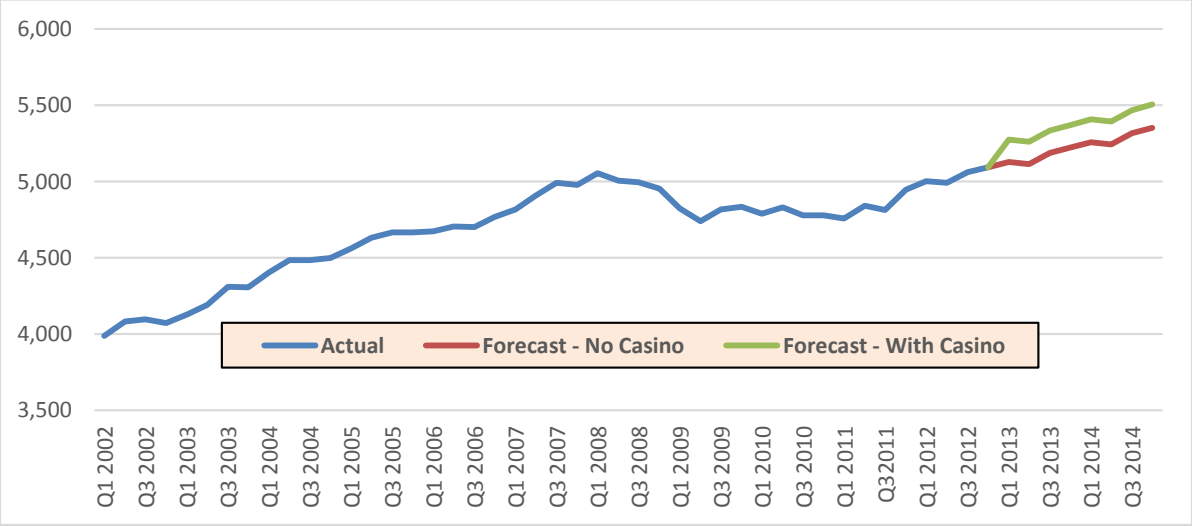
Figure 140: Average weekly wages projection in leisure & hospitality sector: Broward County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/).
Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

The final projections for the leisure and hospitality sector are for the number of establishments. These projections are based on peer county experience, as described earlier. There are estimated to be 153 additional establishments by the end of 2014.

Figure 141: Number of establishments projection in leisure & hospitality sector: Broward County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/).
Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

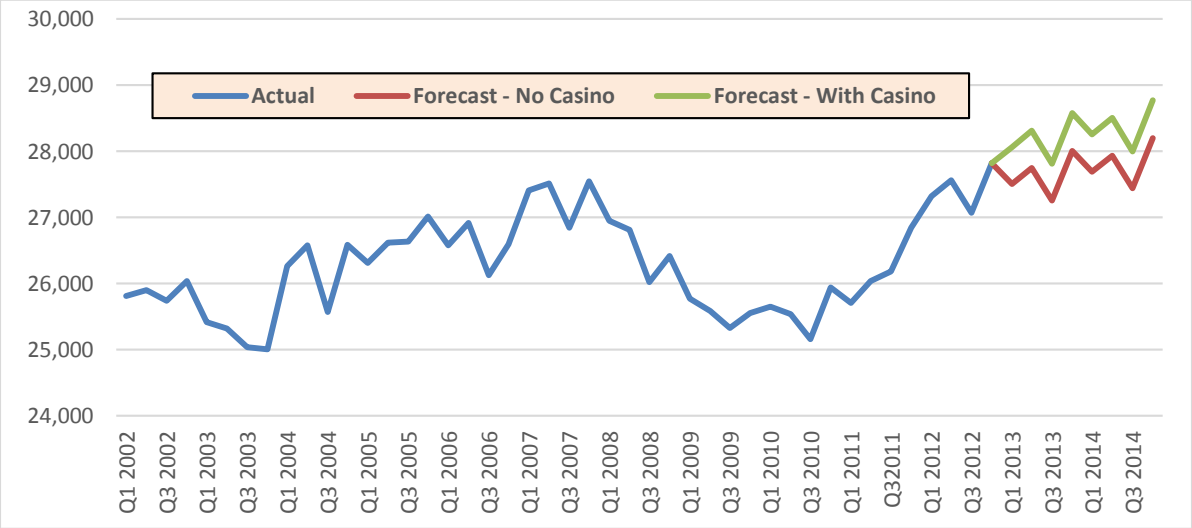
b. "Other Services"

There are a variety of businesses that are not categorized into even narrow industry classifications under the NAICS. Those service-providing firms that are not otherwise categorized are grouped into the category, "other services." We estimate the impact of casino introduction on

this sector, even though we would not expect there to be any relationship between casinos and the firms in this categorization. However, testing the casino effect provides information on whether or not there is complementarity or substitution among casinos and these seemingly unrelated businesses.

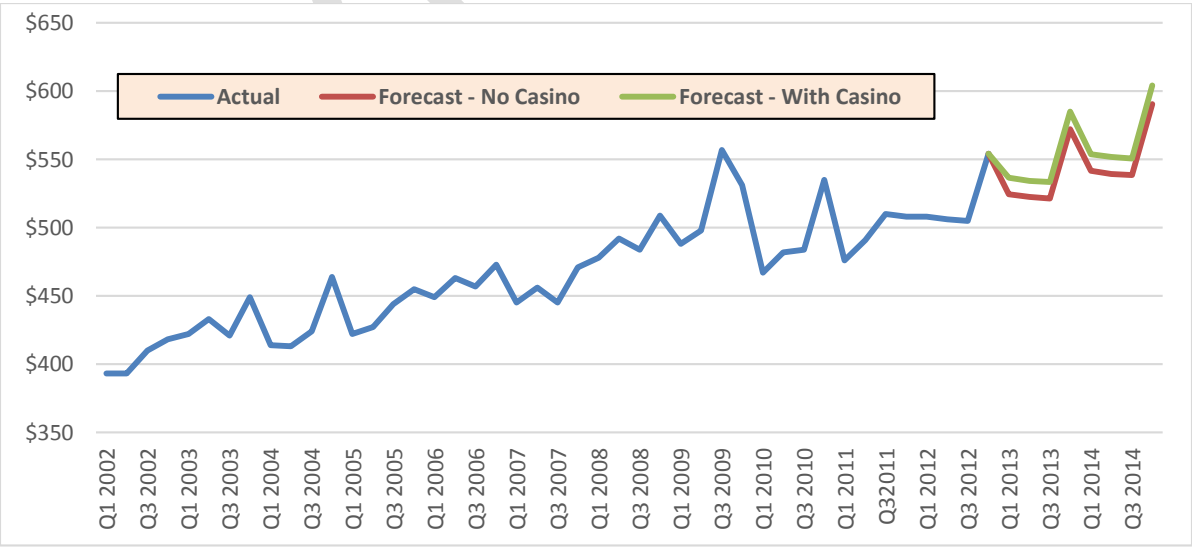
As explained above, the before- and after-casino trends in non-Florida peer counties are used to estimate the likely impact of casino introduction. The results for Other Services employment (572), average weekly wages ($13.47), and number of establishments (258), are presented in the figures below.

Figure 142: Number employed projection in other services: Broward County



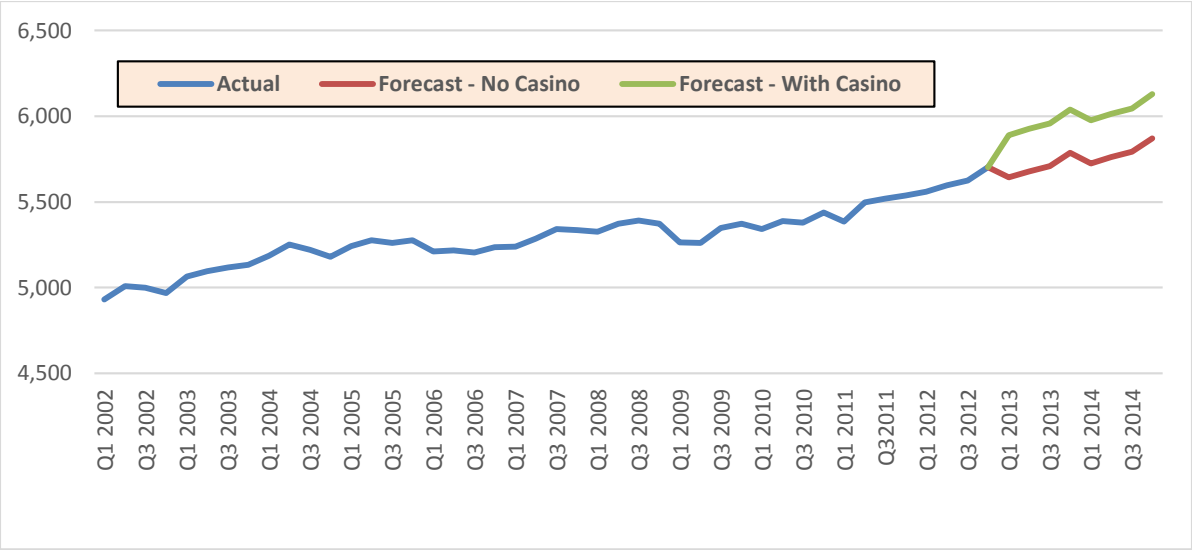
Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

Figure 143: Average weekly wage projection in other services: Broward County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

Figure 144: Number of establishments projection in other services: Broward County



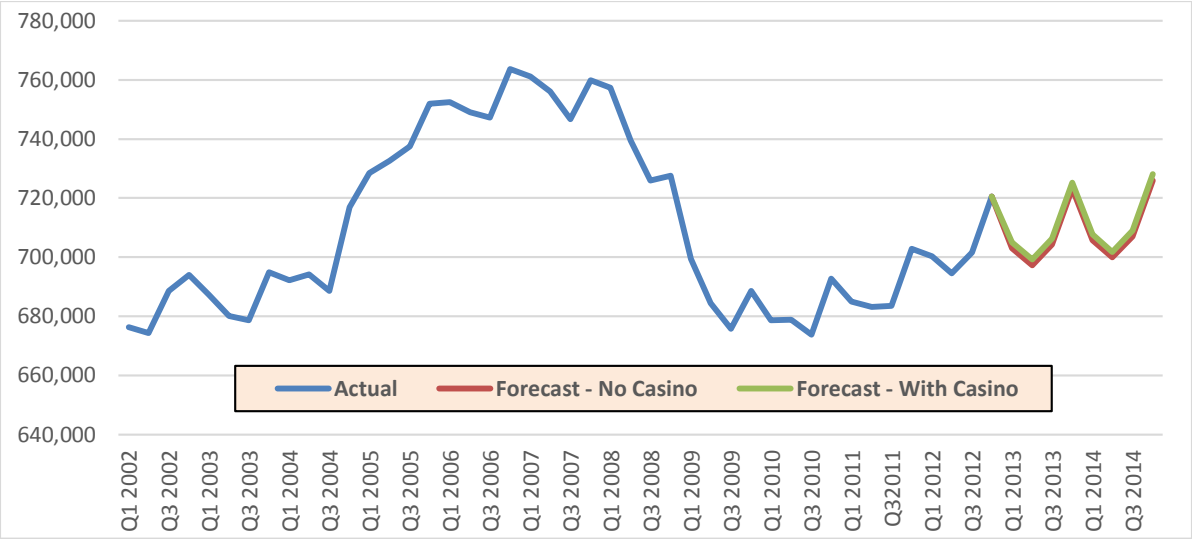
Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

c. "All Industries"

Next, we examine the projected changes for "All Industries" in Broward County. Generally, the impacts for all counties will always be smaller, in percentage terms, than they will be for the more narrowly-defined leisure and hospitality sector. We follow the same order in discussion as above, showing the estimated employment effect, followed by the average weekly wages, and number of establishments.

Cotti estimates very small, effects of casinos for countywide employment and wages, at least for large population counties. As noted earlier, the estimated employment effect is only 0.28 percent, while the wage effect is -0.12 percent. Neither of these effects is statistically significantly different from zero. As a result, the projected impacts shown in the figure below are indeed very minor, almost indistinguishable from the no-casino trend.

Figure 145: Employment projection in all industries: Broward County

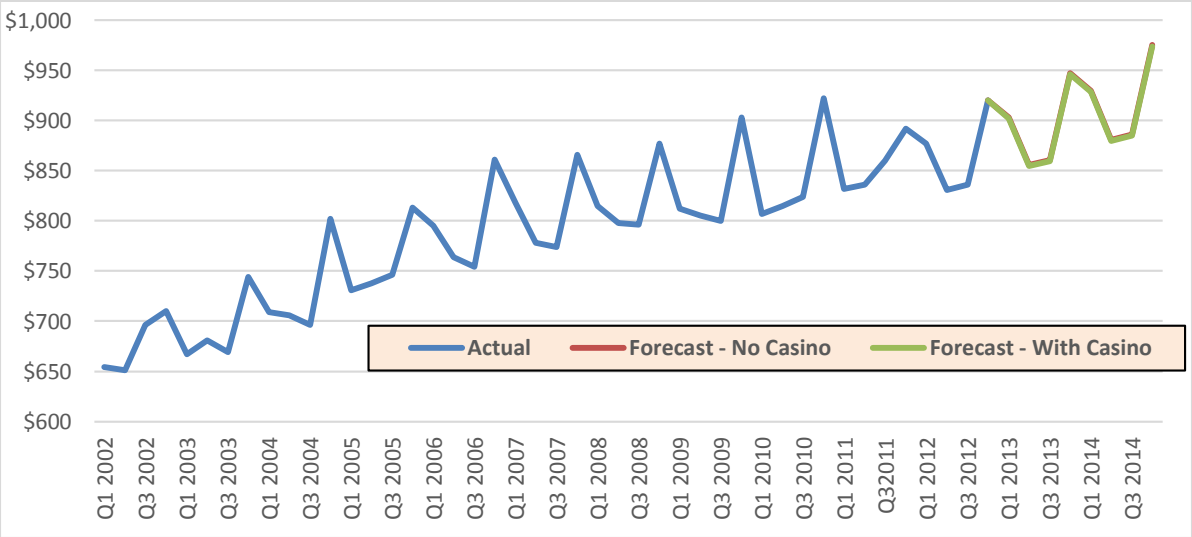


Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

The estimated employment effect amounts to 2,033 new jobs attributable to casinos, by the fourth quarter of 2014.

The average weekly wage effect is almost nil, a statistically insignificant -$1.17. The difference is so small that it does not show up in a graphical depiction. (For Broward, we present the graph, but for the sake of brevity, we omit the "all industries" wage chart for other counties.) The estimated 2014Q4 wage without a casino in Broward County is $975.23; with a casino it is $974.06.

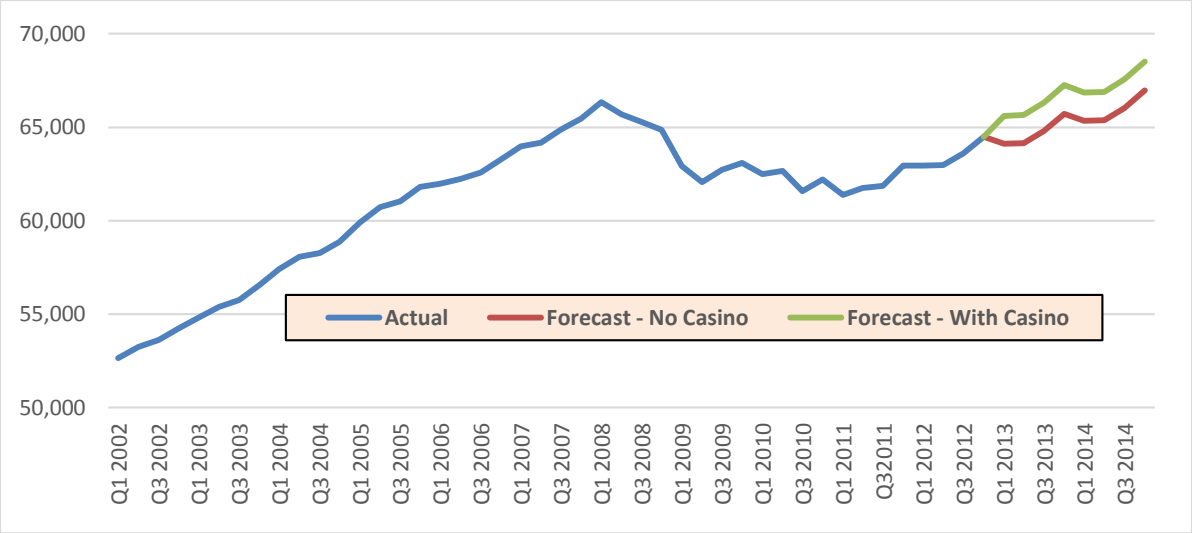
Figure 146: Average weekly wages projection in all industries: Broward County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

Lastly, the estimated casino impact on the number of establishments for Broward County is illustrated in the chart below. As noted earlier, these estimates are based on the experience in peer counties, since Cotti did not provide estimated effects on this variable.

Figure 147: Number of establishments projection in all industries: Broward County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

By the end of 2014, Broward is projected to have 1,553 more establishments with a casino than without one.

It should again be emphasized that the projections based on the peer counties are less reliable than the projections based on the Cotti estimates. This is because Cotti's estimated impacts are the result of regression analysis which controls for demographic and economic factors that could affect the results. The estimated effects based on the peer counties do not control for these other factors, so we cannot be as confident that the projected impacts are not the result of other, confounding influences.

2. Hillsborough County

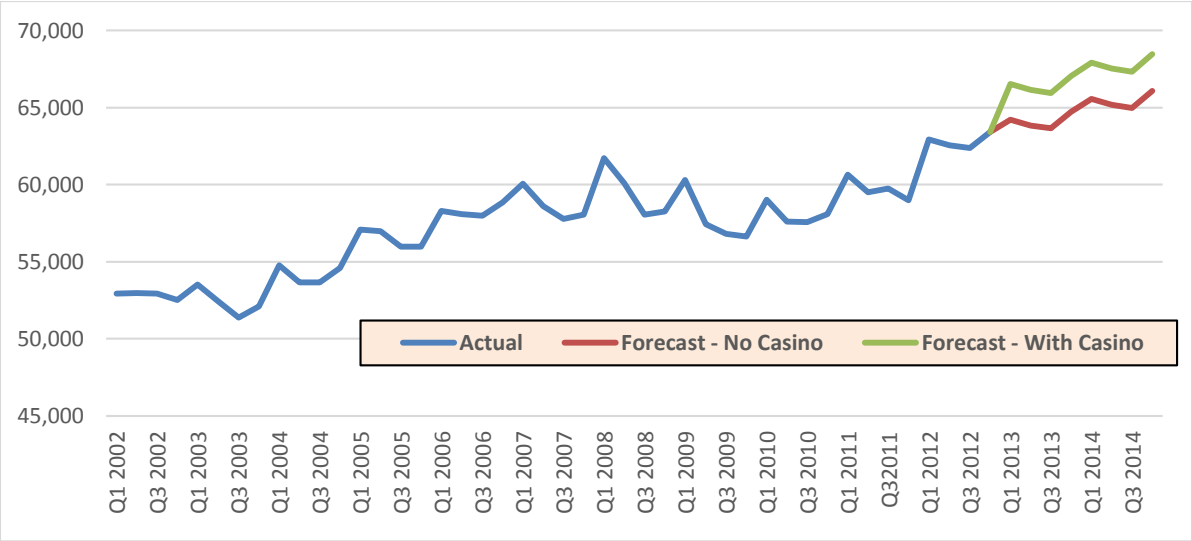
Hillsborough County includes Tampa and other smaller cities. As with the other counties considered by Spectrum to be likely candidates to host a commercial casino if casinos are legalized, Hillsborough has a relatively high population (over 1.2 million).

We present the projected casino impacts for Tampa/Hillsborough County below. However, since we saw in the case of Broward County, the impacts on "All Industries" employment and wages are relatively minor, we omit these graphical presentations.

a. Leisure & Hospitality

The projected employment effect for the Hillsborough County leisure and hospitality sector is 2,385 jobs, as shown below.

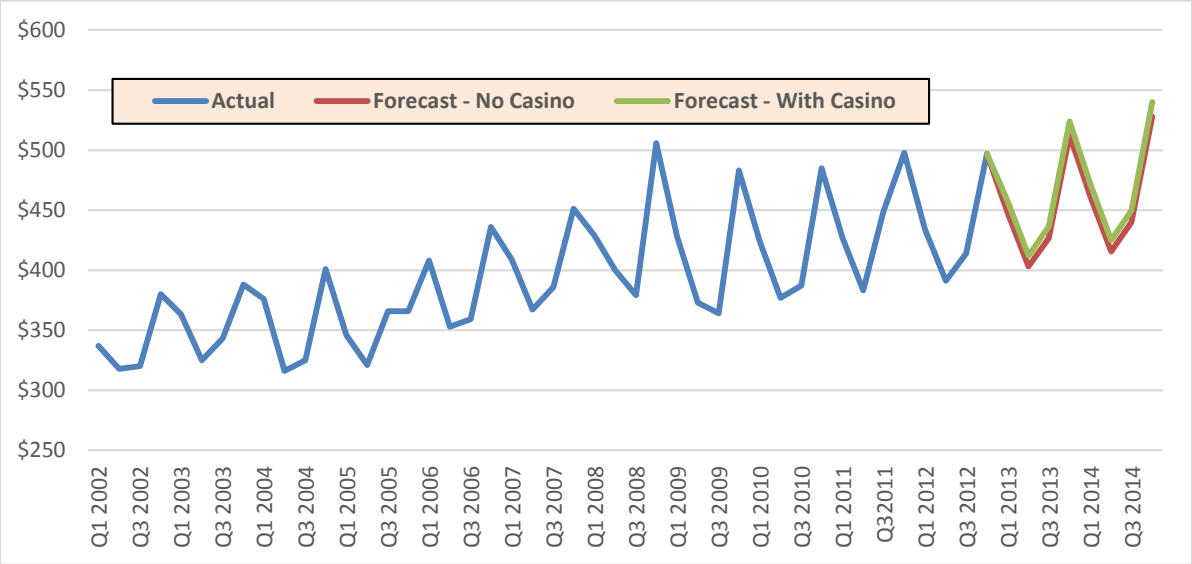
Figure 148: Number employed projection in leisure & hospitality: Hillsborough County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

The wage effect illustrated in the figure below is $12.04 (again, at the end of 2014).

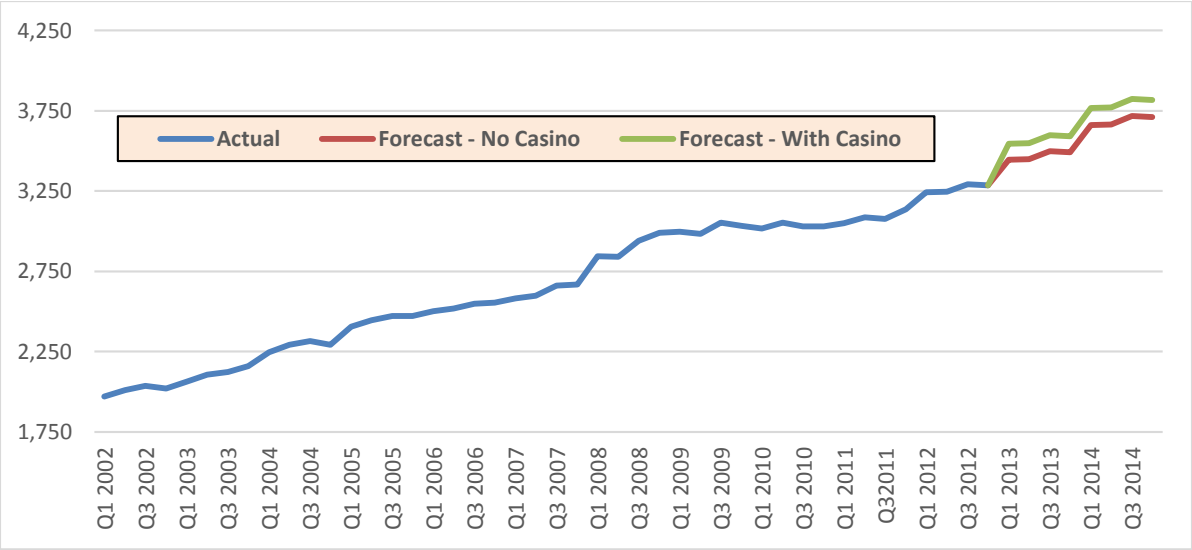
Figure 149: Average weekly wages projection in leisure & hospitality: Hillsborough County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

Lastly, we present the predicted change in number of establishments (106) for the leisure and hospitality sector in Hillsborough County.

Figure 150: Number of establishments in leisure & hospitality: Hillsborough County

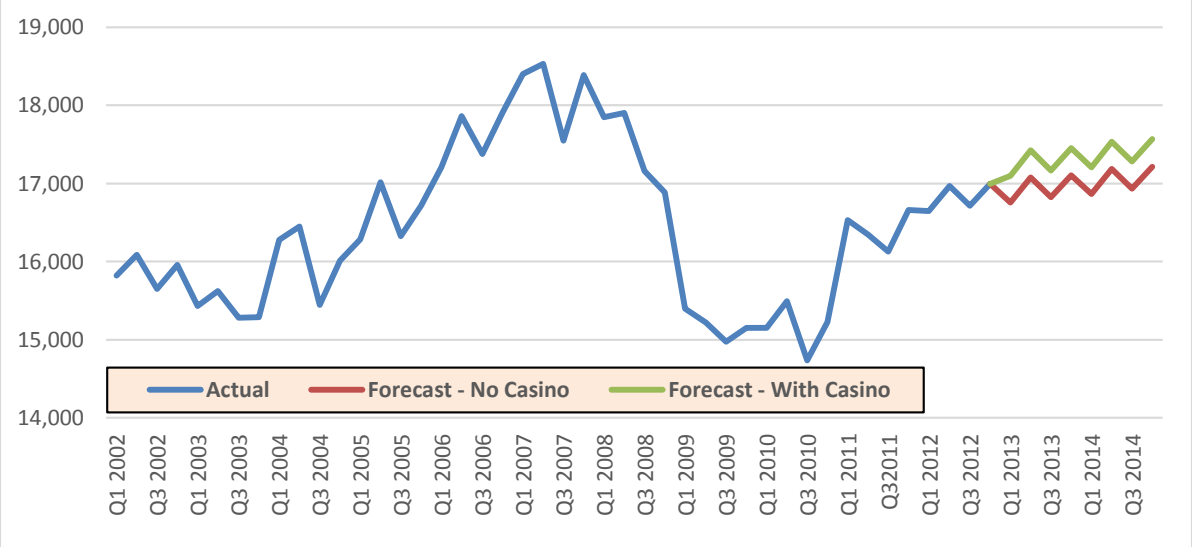


Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

b. Other Services

Next we present the estimated impacts on "Other Services," for employment, average weekly wages, and number of establishments, based on the trends from peer counties. The employment effect is estimated to be 349 jobs.

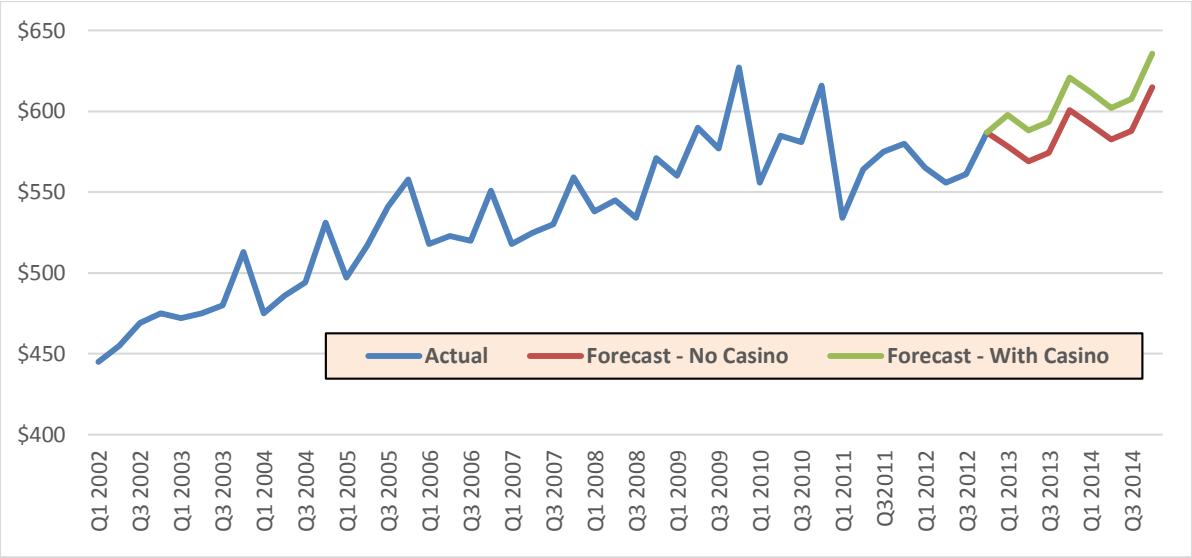
Figure 151: Number employed projection in other services: Hillsborough County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

The predicted effect on payroll, as shown in the figure below, is $20.66.

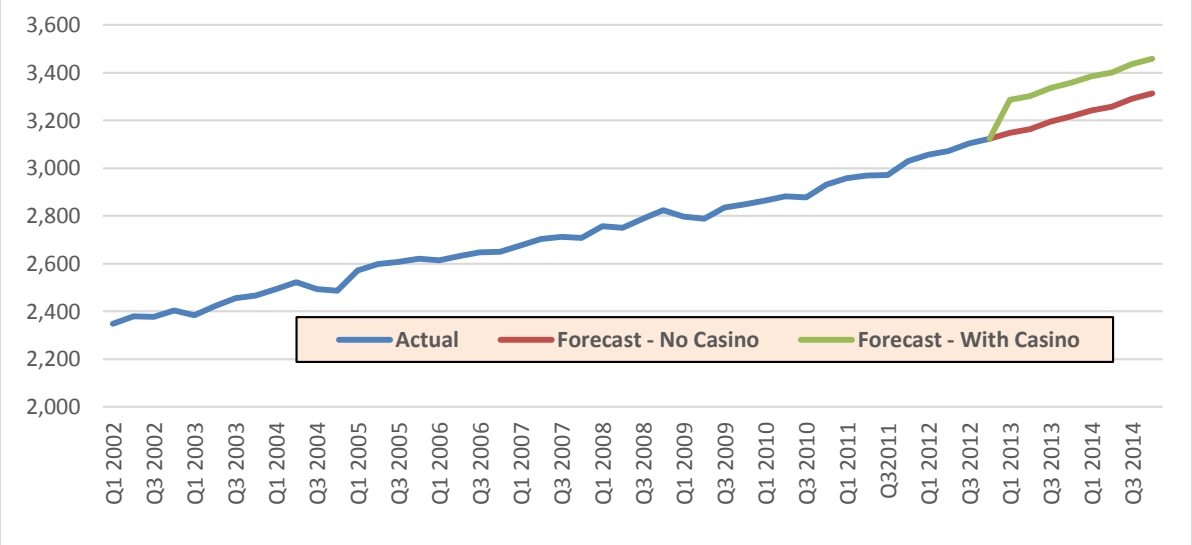
Figure 152: Average weekly wages projection in other services: Hillsborough County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/).
Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

Finally, the predicted effect on the number of establishments in "Other Services" (145) is shown below.

Figure 153: Number of establishments projection in other services: Hillsborough County

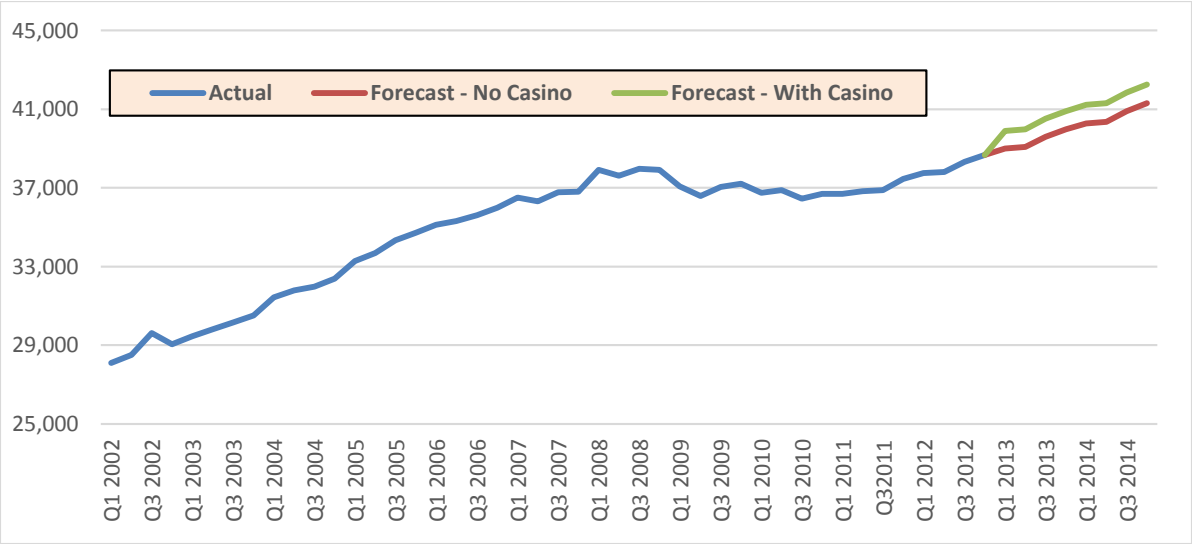


Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/).
Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

c. All Industries

Next we show the results on the number of establishments for "All Industries." The projection is that there will be 958 more establishments with a casino than without in Hillsborough County.

Figure 154: Number of establishments in all industries: Hillsborough County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

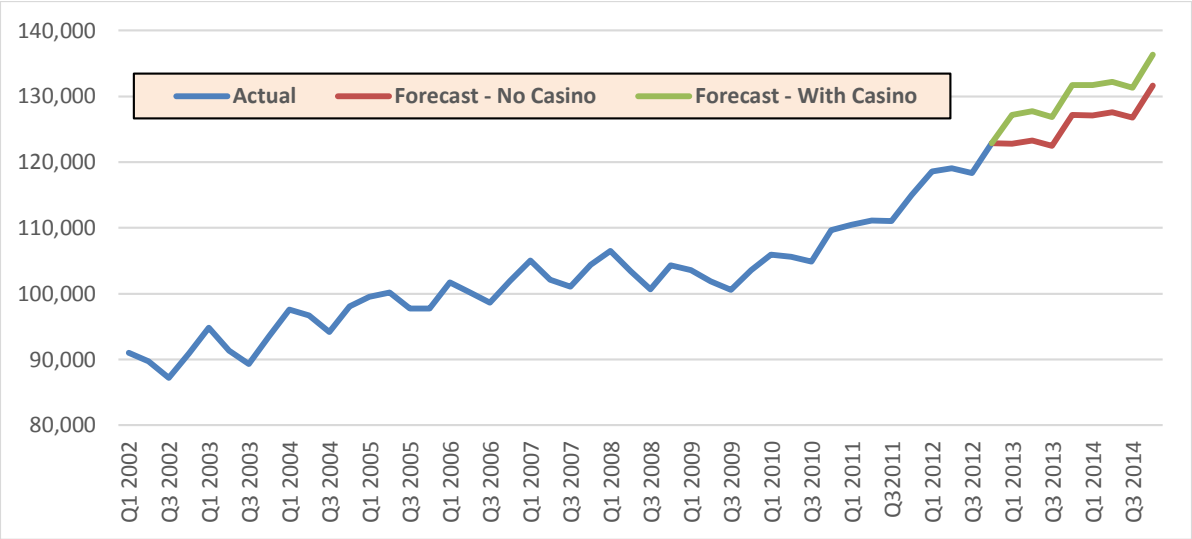
3. Miami-Dade County

Miami-Dade County obviously has a well-developed tourism industry with its beaches and other attractions. In addition, there are already a variety of legal gambling options for consumers. Nevertheless, the introduction of a casino in Miami is projected to have a meaningful impact on employment, as shown in the figure below.

a. Leisure & Hospitality

By the fourth quarter of 2014, the prediction is that there will be 4,751 more jobs in the leisure and hospitality industry if a commercial casino were to open, compared to the status quo case.

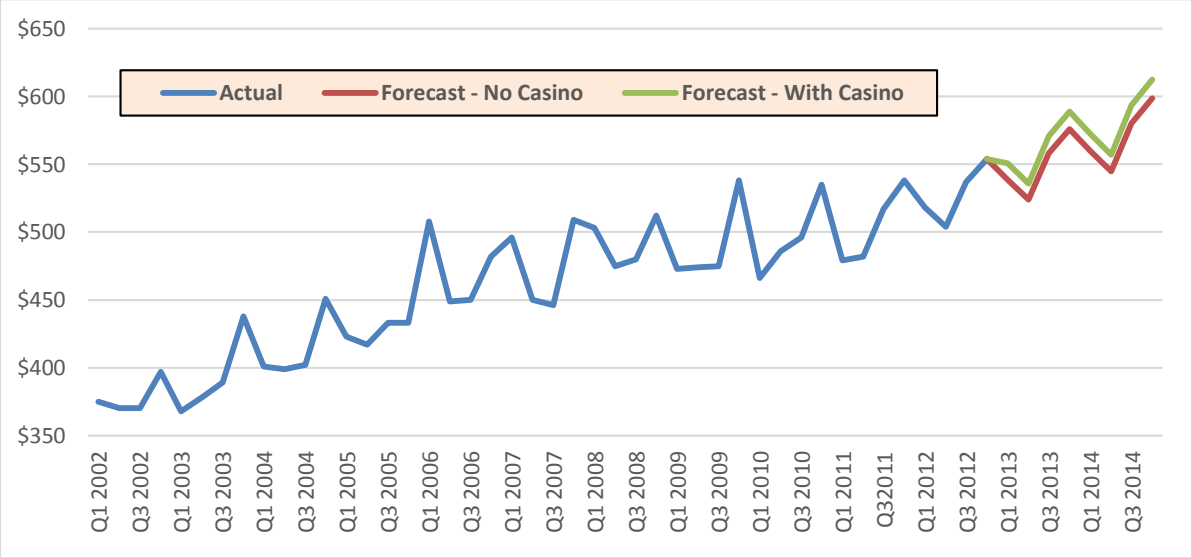
Figure 155: Number employed projection in leisure & hospitality: Miami-Dade County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

The anticipated casino effect on average weekly wages is shown below. At the end of 2014, the number if a casino is introduced is estimated to be $13.65 higher than if no casino is added to Miami.

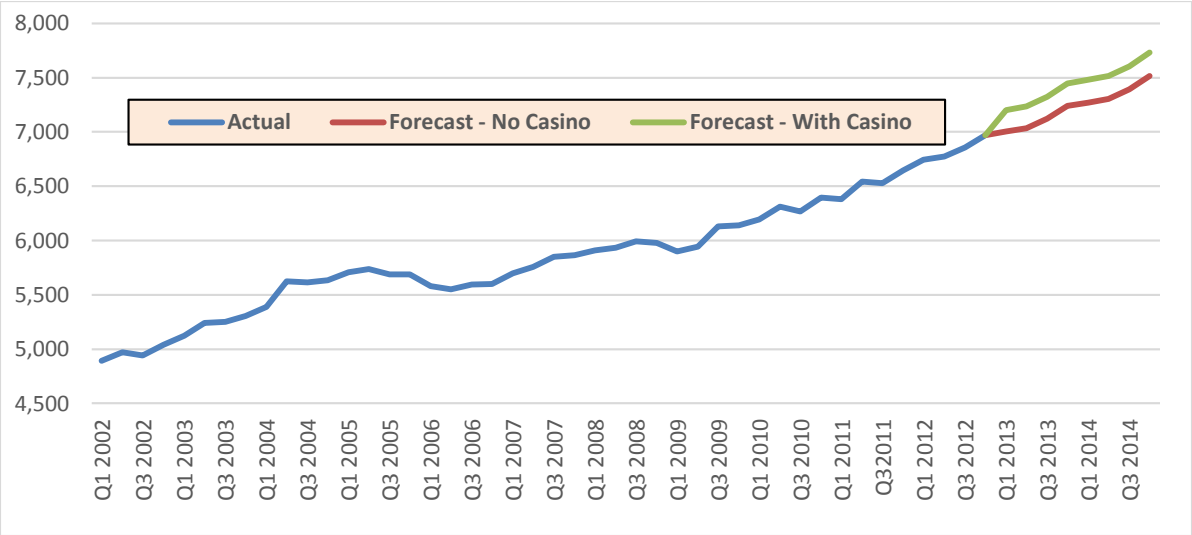
Figure 156: Average weekly wages projection in leisure & hospitality: Miami-Dade County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

Next for the leisure and hospitality sector we present the expected casino effect on number of establishments. The introduction of a casino is projected to increase the number of establishments by 214.

Figure 157: Number of establishments projection in leisure & hospitality: Miami-Dade County



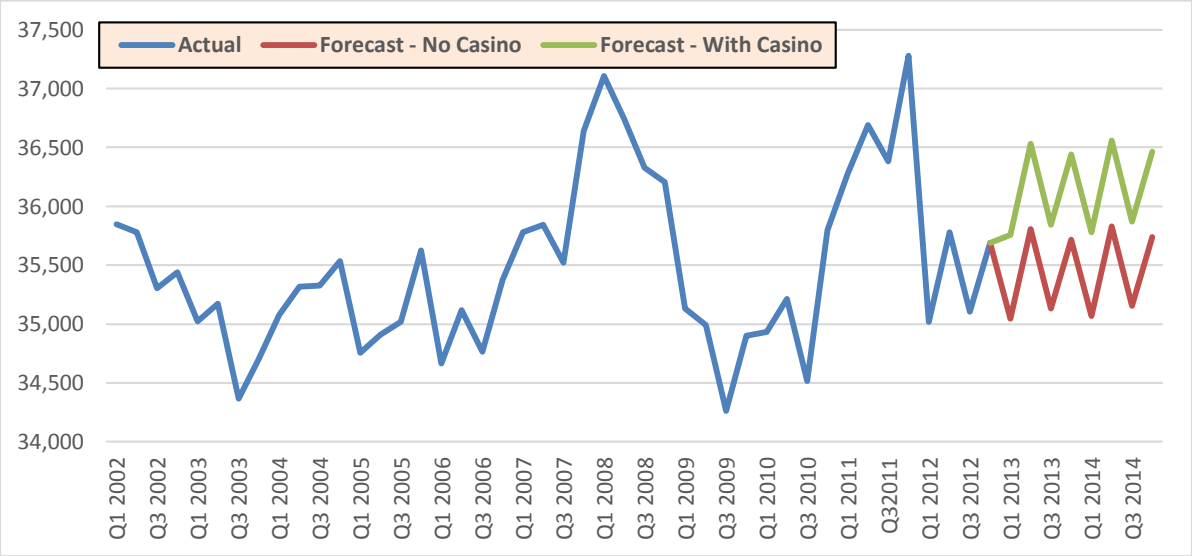
Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

b. Other Services

Next we present the estimated impacts on "Other Services," for employment, average weekly wages, and number of establishments, for Miami-Dade County, based on the trends from peer counties.

The chart on projected employment shows that with a commercial casino added to Miami-Dade, there are expected to be an addition 726 jobs in the Other Services sector.

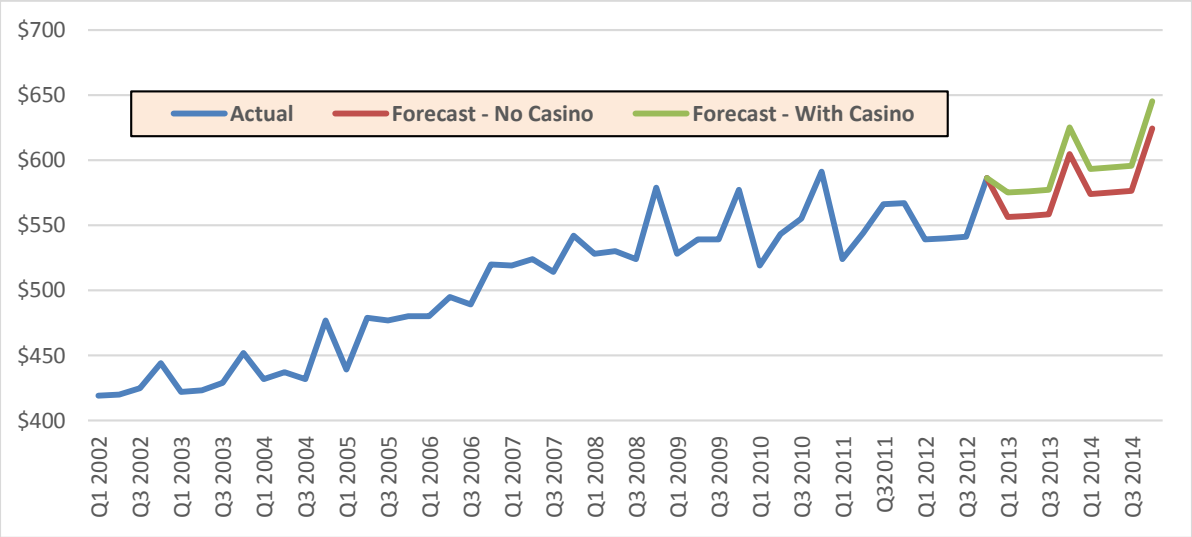
Figure 158: Number employed projection in other services: Miami-Dade County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

Next we show the anticipated effect of a casino on average weekly wages ($20.97).

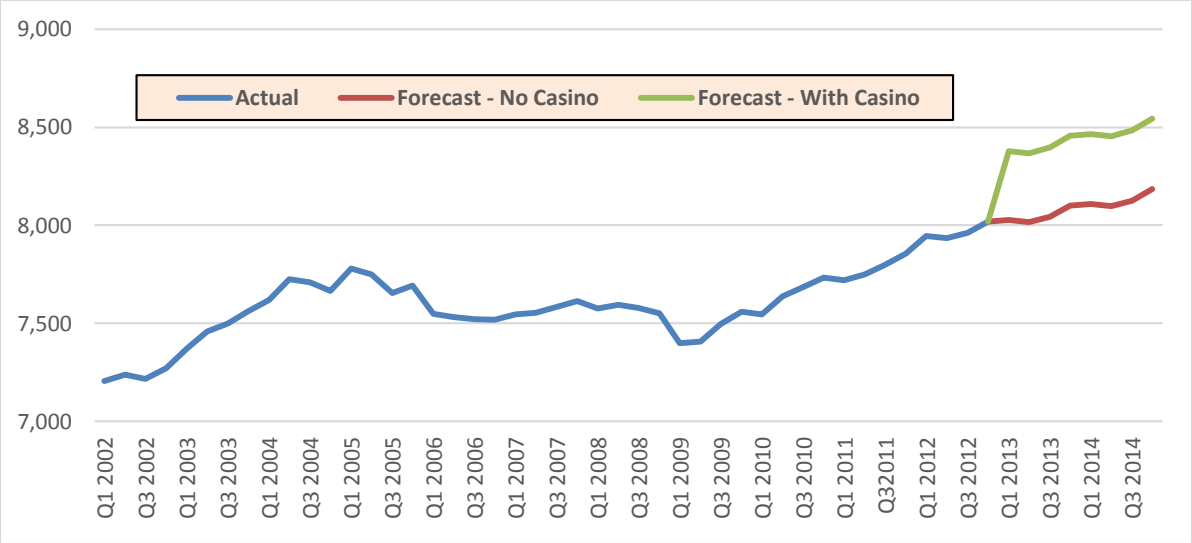
Figure 159: Average weekly wages projection in other services: Miami-Dade County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/).
Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

Finally, the projection is that there would be an addition 359 establishments in "Other Services" by the end of 2014 if a commercial casino were opened in the county.

Figure 160: Number of establishments projection in leisure & hospitality: Miami-Dade County

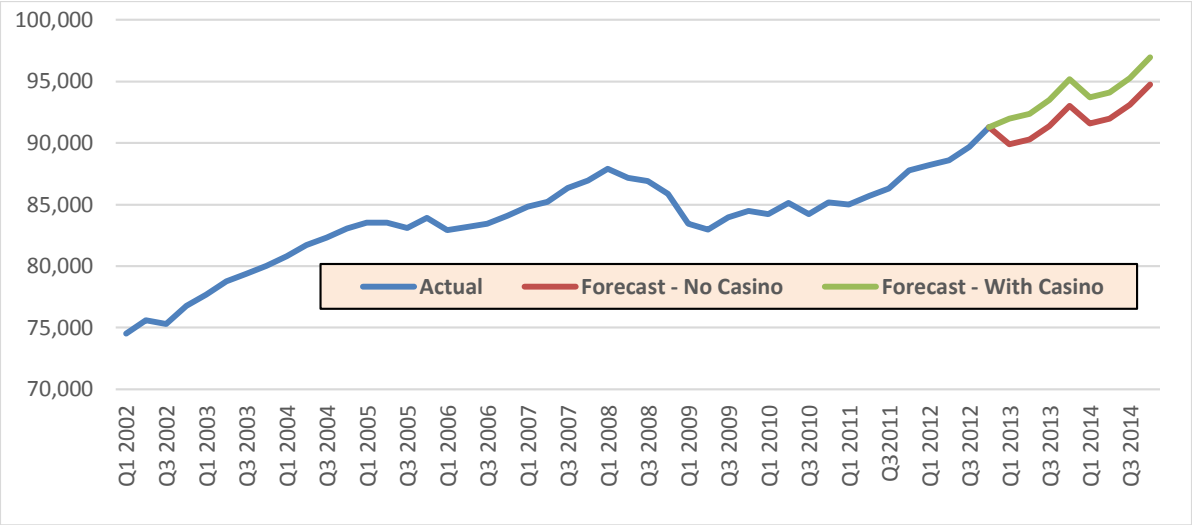


Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/).
Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

c. All Industries

Our projection indicates a significant increase in total number of establishments due to a commercial casino, of 2,198.

Figure 161: Number of establishments projection in all industries: Miami-Dade County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

4. Orange County

Orange County is probably best known for Walt Disney World, obviously a major tourist attraction for the state. The introduction of a casino in Orlando, or near Walt Disney World, would probably be more controversial than the introduction of a casino in the other counties being considered. Many people with moral concerns about state-sanctioned gambling may object to building a casino near a family-oriented attraction like Walt Disney World. Nevertheless, because a large number of tourists visit Orlando each year, Orange County could be considered as a host county for a new casino.

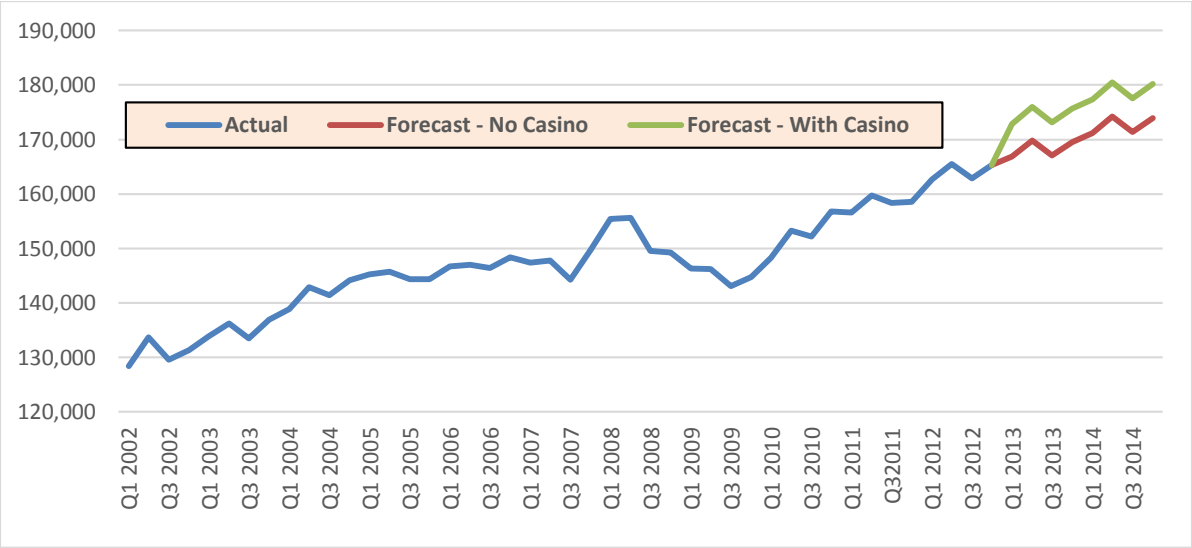
As was true of the other counties previously considered, Orange County is among the top 1 percent populated counties in the United States. (It has about 1.2 million people.) For this reason, we again utilize Cotti's estimates based on the top-third highest population US counties. Where Cotti estimates are not available, we again utilize the estimates created from peer-county data.

As above, we present graphical depictions of the estimated casino effects on leisure & hospitality sector employment, wages, and number of establishments. We show the same for "Other Services," but show only the number of establishments for "All Industries" since the effects on payroll and employment are basically zero.

a. Leisure & Hospitality

The first figure shows the estimated employment impact for Orange County's leisure and hospitality industry, assuming the 2013 opening of a casino. By the end of 2014, we would anticipate there being 6,279 more jobs if a casino is opened, compared to the no-casino case.

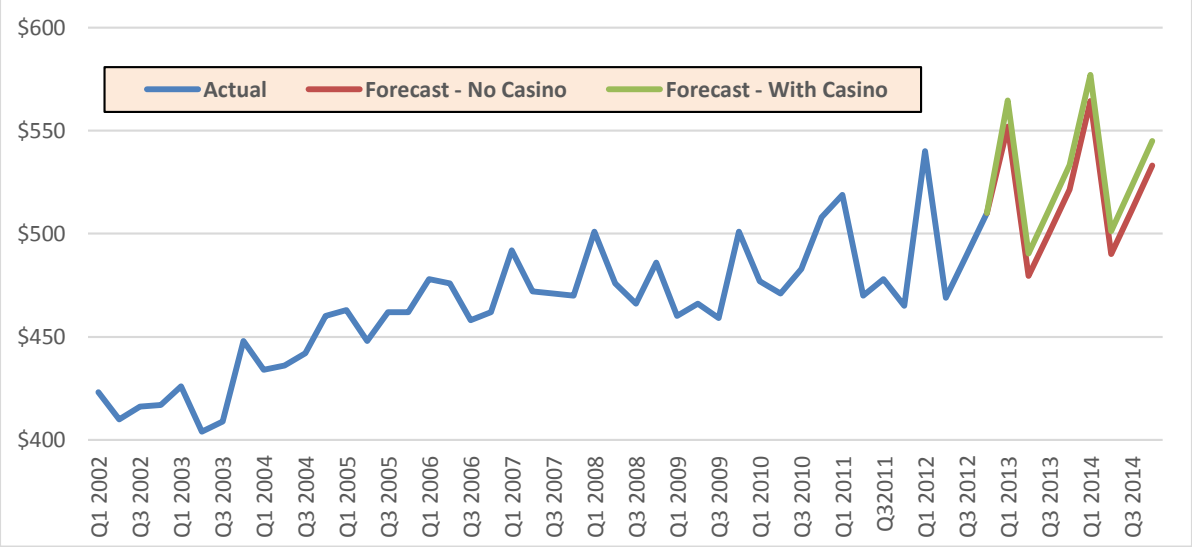
Figure 162: Number employed projection in leisure & hospitality: Orange County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

The estimated average weekly wages effect is illustrated in the chart below. The results are similar to the projections for other counties, with wages increasing by about $12.15 by the end of 2014.

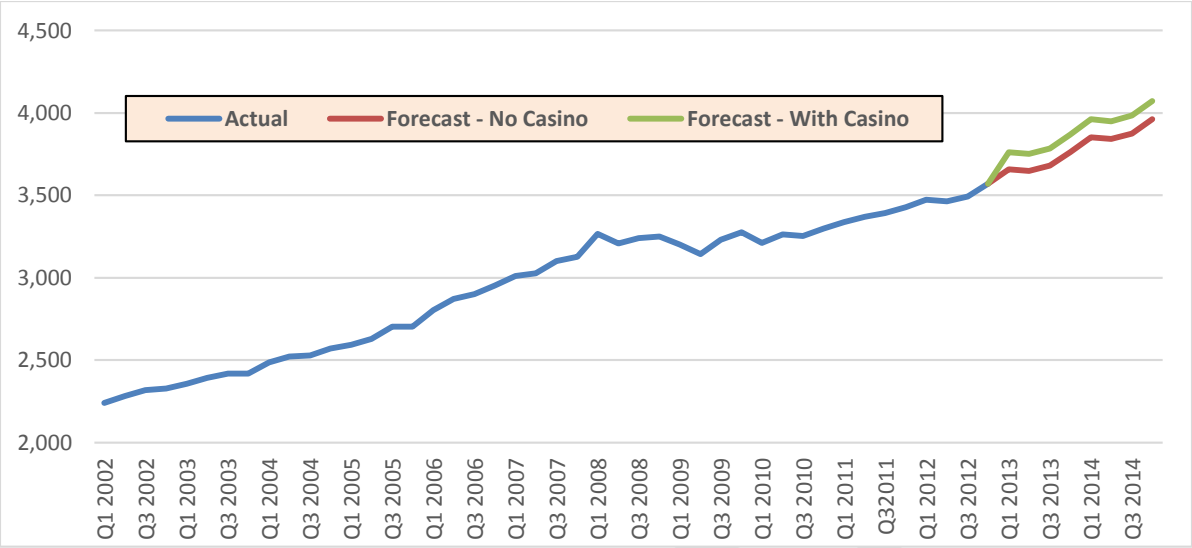
Figure 163: Average weekly wages projection in leisure & hospitality: Orange County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

The projections for number of establishments is shown below. The addition of a casino is projected in increase the number of leisure & hospitality establishments by 113.

Figure 164: Number of establishments in leisure & hospitality: Orange County

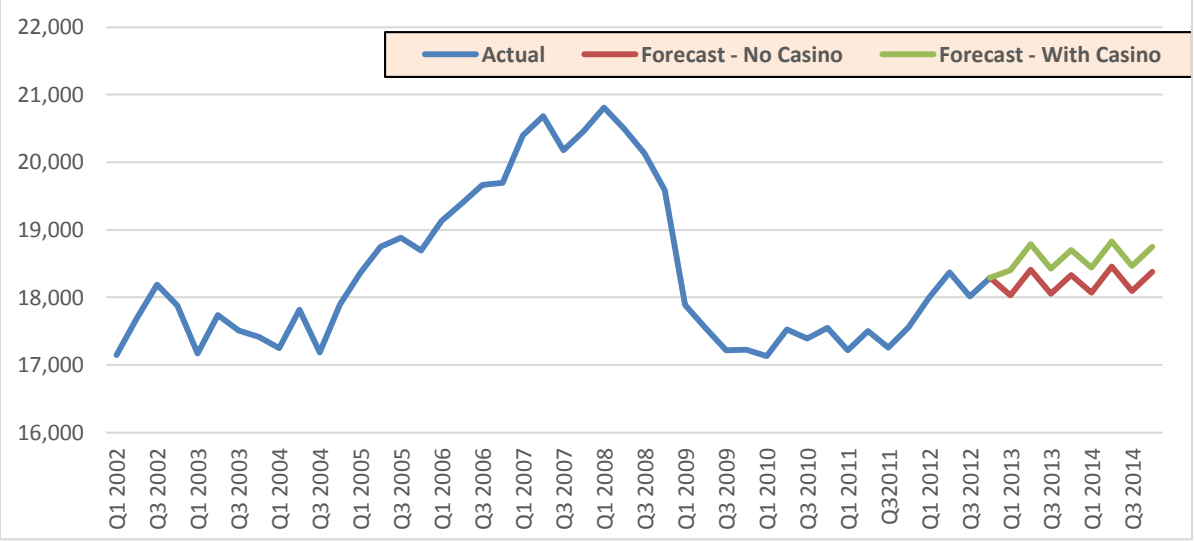


Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

b. Other Services

Next we present the estimated impacts on "Other Services," for employment, average weekly wages, and number of establishments, for Orange County. The introduction of a casino is expected to increase the number of jobs in this sector by 373.

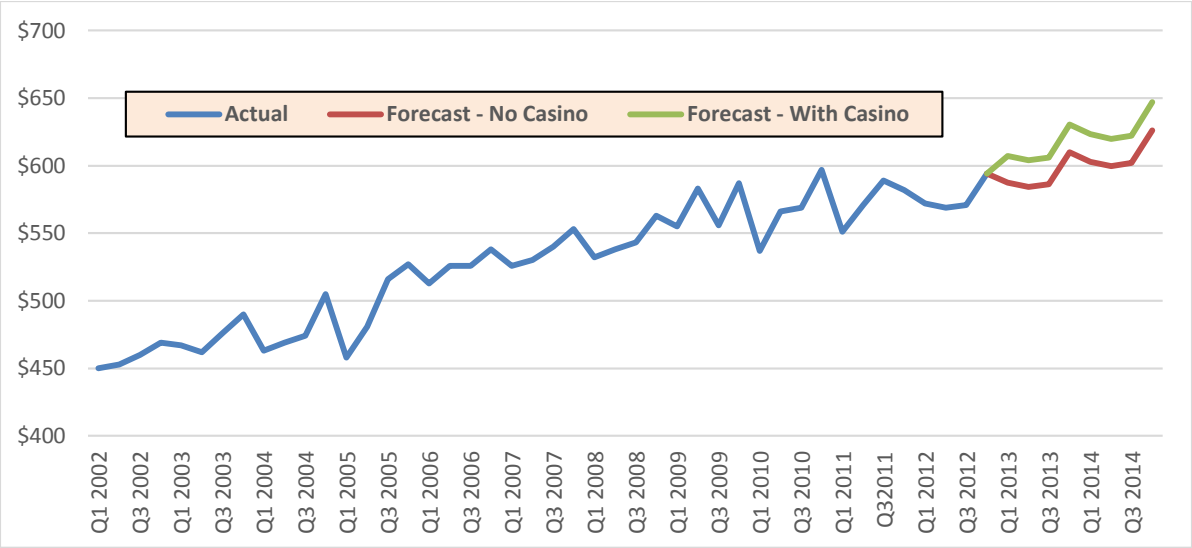
Figure 165: Number employed projection in other services: Orange County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

In terms of average weekly wages in other services, they are expected to increase by $21.04, as shown in the figure below.

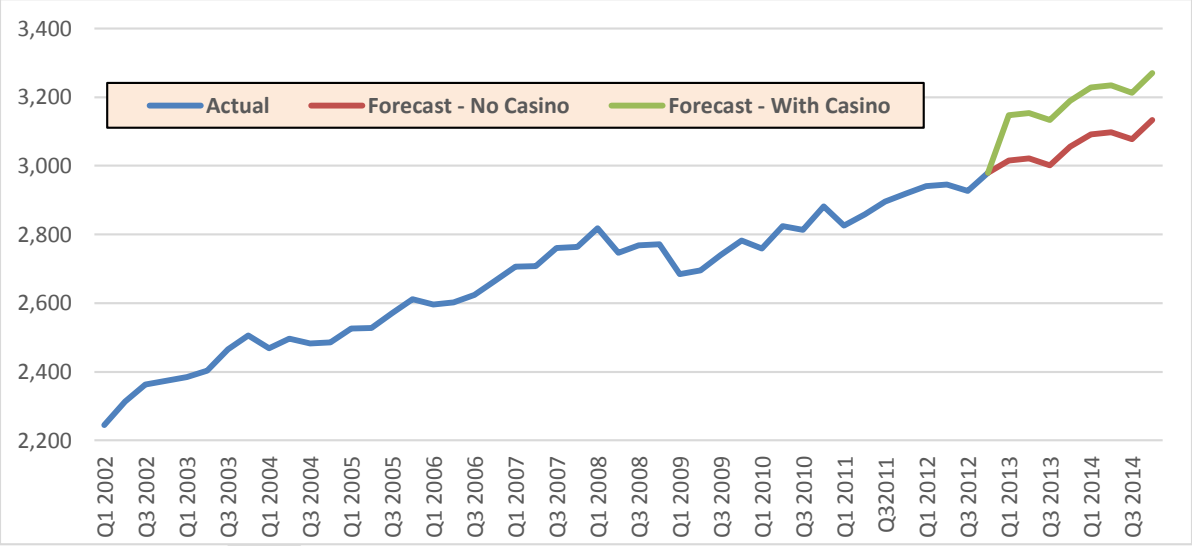
Figure 166: Average weekly wages projection in other services: Orange County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

Lastly, the number of other services establishments is projected to increase by 138 with the introduction of a commercial casino.

Figure 167: Number of establishments in other services: Orange County



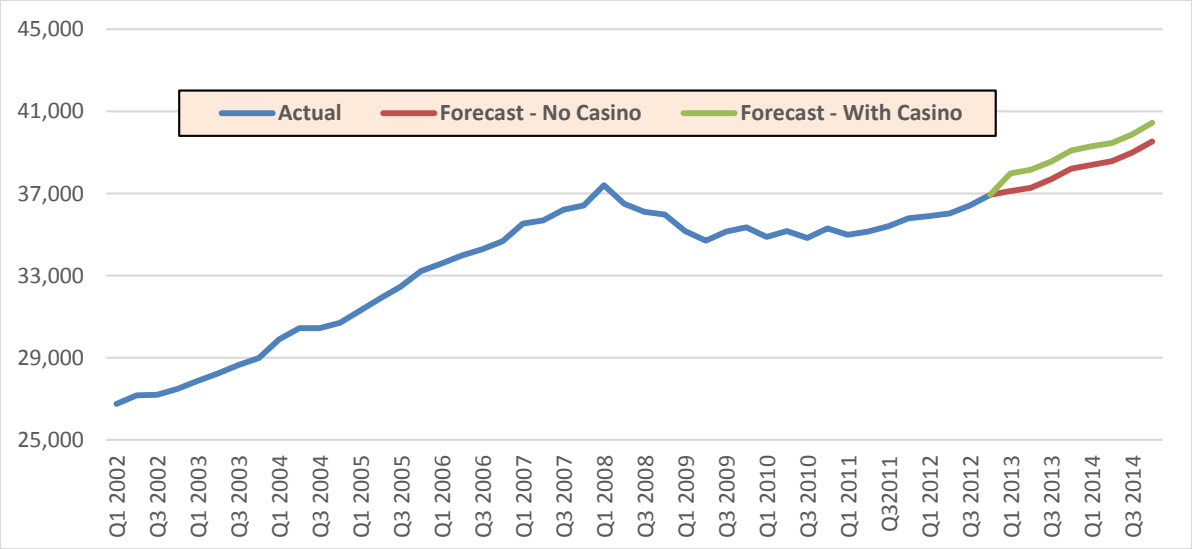
Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

c. All Industries

As noted in for the other prospective casino counties discussed above, the project impact of a casino in Orange County on employment and average payroll – countywide – is essentially

zero. Therefore, we present only the figure illustrating the projected change in the number of establishments (917).

Figure 168: Number of establishments in all industries: Orange County



Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/). Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

C. Summary of Results

Our analysis has focused on the employment and wage impacts, as well as local business patters, of adding machine games at existing pari-mutuels in Florida and of introducing commercial casinos in selected counties in Florida.

Based on the empirical evidence from the literature and our analysis in selected peer counties, the expectation is that the economic impacts of casinos in highly populated counties are relatively minor. Nevertheless, for the industry sectors we have considered, there are benefits that accrue within those sectors. Employment, average wages, and number of business firms are all projected to increase with the expansion of casinos either at existing pari-mutuels or at new locations in the state.

In the table below we present the estimated employment and average weekly wage effects of introducing a stand-alone casino. The projected changes are for the fourth quarter of 2014, which is the eighth quarter after the casino is assumed to open (at the beginning of 2013). These projections are based on the Cotti estimated casino impacts for large population counties, as well as the peer counties, in the case of variables for which Cotti did not provide estimates.

Figure 169: Summary results: predicted changes from commercial casino, by county

Sector	Number of Establishments	Number Employed	Average Weekly Wages
Broward County			
Leisure & Hospitality	+ 153	+ 3,053	+ $10.49
Other Services	+ 258	+ 572	+ $13.47
All Industries	+ 1,533	--	--
Hillsborough County			
Leisure & Hospitality	+ 106	+2,385	+ $12.04
Other Services	+ 145	+ 349	+ $20.66
All Industries	+ 958	--	--
Miami-Dade County			
Leisure & Hospitality	+ 214	+4,751	+ $13.65
Other Services	+ 359	+ 726	+ $20.97
All Industries	+2,198	--	--
Orange County			
Leisure & Hospitality	+ 113	+6,279	+ $12.15
Other Services	+ 138	+ 373	+ $21.04
All Industries	+ 917	--	--

Source: Data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages (http://www.bls.gov/cew/).
Projections based on Spectrum Gaming Group calculations using Cotti estimated impacts and peer county estimated impacts.

Since casinos are a component of the leisure & hospitality sector, it may not be surprising that there are positive employment effects expected. Still, the positive results raise doubt about the "substitution effect" within the leisure & hospitality sector. In addition, when we examine "other services" our goal is to determine whether casinos would have a negative impact on seemingly unrelated business firms. Our projections suggest that casinos are complementary to other services.

At the county-level, considering all industries in aggregate, however, it is unclear whether the introduction of casinos will have much of an effect at all on overall employment or on wages. Empirical evidence from the literature suggests that in large counties, the economic impacts of casinos are very minor. When we examine the peer county unemployment rate before and after the introduction of casinos, there is no clear indication that the casino affects the trend in unemployment markedly. This is consistent with the insignificant employment effect found for "All Industries" in the county.

D. Caveats

As with any empirical analysis, this study provides an analysis based on the data available, and researchers' best judgment about how to project variables into the future. Obviously there are assumptions that must be made, and the results could vary significantly if the underlying assumptions of the analysis were changed. We believe it is important to point out some key considerations that should be kept in mind when interpreting the results of this study.

First, the estimates are not sensitive to whether there is an existing Native American casino, or other major tourist attraction, in the county. Obviously, these types of factors could have an important effect on the impacts of a new casino. A much more sophisticated analysis would be needed to control for these factors.

Second, the estimates are not sensitive to the specific size of the casino introduced. There is no known data set that tracks sizes of all casinos in the United States over time. Such data would be impossible to collect, in any case, since casinos routinely expand their property sizes, and there are no property-level historical data on these changes for all US casinos. Obviously the larger the scale of capital investment, the greater the presumed effect on employment and wages.

Third, estimates are just that. There are alternative ways to analyze the data, simpler and more complicated, but there is no reason to believe that undertaking a more technical analysis would yield significantly different results. Ultimately, economic forecasts rely heavily on the assumptions being made. We have attempted to be conservative wherever possible in projecting the economic impacts of casinos in Florida.

VII. State-Level Economic Variables

It is informative to view the preceding analysis and conclusions in the context of more "macro" economic expectations. Therefore, we provide some summary projections at the state-level from analysis by project partner Regional Economic Models Inc. ("REMI").

Florida, like much of the nation, is still living with the legacy of the financial crisis. In fact, the state fared worse than many others during that time. However, looking forward, Florida's prospects are better. The table below shows employment in Florida over time and for select sectors. While the average annual growth in total employment may look small at 1 percent, it is higher than the same rate for the nation as a whole, which stands at 0.94 percent. That small difference means that jobs in 2024 compared to 2013 are 12 percent greater in Florida compared to 11 percent for US.

Figure 170: Projected employment in Florida in various sectors, Tax-PI standard baseline forecast

Category	2013	2014	2015	2016	2017	2018	2019
Total Employment	10,263,389	10,377,939	10,566,952	10,735,921	10,923,879	11,072,997	11,200,840
Performing arts and spectator sports	120,538	121,396	122,931	124,322	125,788	126,719	127,441
Museums, historical sites, zoos, and parks	6,750	6,883	7,048	7,231	7,435	7,611	7,768
Amusement, gambling, and recreation	183,324	185,133	187,664	190,470	193,643	196,048	198,001
Accommodation	175,892	176,380	177,721	178,912	180,177	180,629	180,689
Food services and drinking places	695,998	698,530	704,237	710,501	717,799	721,988	724,226

Category	2020	2021	2022	2023	2024	Avg. Annual Growth
Total Employment	11,277,801	11,318,579	11,341,136	11,379,627	11,452,360	1.00%
Performing arts and spectator sports	127,612	127,409	127,105	127,026	127,341	0.50%
Museums, historical sites, zoos, and parks	7,887	7,980	8,061	8,150	8,258	1.85%
Amusement, gambling, and recreation	199,064	199,577	199,785	200,166	200,967	0.84%
Accommodation	179,934	178,730	177,357	176,257	175,672	-0.01%
Food services and drinking places	722,967	719,120	714,924	711,518	709,869	0.18%

Source: Spectrum Gaming Group, Regional Economic Models Inc.

Each of the jobs indicated above comes with a paycheck and other compensation. The following table shows total earnings, which is the sum of wages, benefits, and proprietors' income. In other words, "earnings" is the most comprehensive measure of remuneration received through one's job. The table shows the relative importance of the tourism-related industries in the state. The average share of total earnings for each sector in Florida is larger and in some cases roughly double that of the same sector in the nation. For example, Food Services comprise 4.52 percent of

Florida's earnings and 2.35 percent of the nation's. Amusement, gambling, and recreation comprises 1.8 percent of Florida's earnings and 0.47 percent of the nation's.

Figure 171: Projected earnings in Florida, various sectors, Tax-PI standard baseline forecast (in billions of current dollars)

Category	2013	2014	2015	2016	2017	2018	2019
Earnings by Place of Work	365.79	379.943	396.375	414.406	433.763	453.018	472.193
Performing arts and spectator sports	4.779	4.962	5.167	5.392	5.61	5.825	6.042
Museums, historical sites, zoos, and parks	0.258	0.271	0.286	0.302	0.32	0.337	0.355
Amusement, gambling, and recreation	6.548	6.813	7.097	7.442	7.811	8.172	8.523
Accommodation	6.886	7.117	7.372	7.657	7.93	8.195	8.456
Food services and drinking places	17.077	17.675	18.325	19.078	19.825	20.556	21.269

Category	2020	2021	2022	2023	2024	Avg. Share
Earnings by Place of Work	491.159	509.464	528.092	547.941	570.079	N/A
Performing arts and spectator sports	6.254	6.463	6.682	6.917	7.178	1.28%
Museums, historical sites, zoos, and parks	0.373	0.391	0.409	0.428	0.449	0.07%
Amusement, gambling, and recreation	8.866	9.202	9.541	9.894	10.27	1.80%
Accommodation	8.706	8.952	9.206	9.475	9.773	1.80%
Food services and drinking places	21.952	22.601	23.28	23.99	24.764	4.52%

Source: Spectrum Gaming Group, Regional Economic Models Inc.

The next table shows the contributions to value added of the tourism-related industries. Value added is the gross output of an industry or a sector less its intermediate inputs or the contribution of an industry or sector to Gross State Product. Value added by industry can also be measured as the sum of compensation of employees, taxes on production and imports less subsidies, and gross operating surplus.

Figure 172: Projected value added in Florida in selected tourism-related sectors, Tax-PI standard baseline forecast (in billions of current dollars)

Category	2013	2014	2015	2016	2017	2018	2019
Value Added	883.804	925.644	976.213	1027.496	1083.634	1140.835	1197.755
Performing arts and spectator sports	6.386	6.686	7.036	7.395	7.781	8.169	8.551
Museums, historical sites, zoos, and parks	0.476	0.504	0.536	0.571	0.61	0.65	0.691
Amusement, gambling, and recreation	8.801	9.233	9.718	10.246	10.828	11.42	12.002
Accommodation	14.459	15.057	15.749	16.464	17.228	17.984	18.713
Food services and drinking places	25.568	26.675	27.935	29.277	30.739	32.197	33.59

Category	2020	2021	2022	2023	2024	Avg. Share
Value Added	1252.48	1305.136	1358.77	1415.604	1478.275	N/A
Performing arts and spectator sports	8.916	9.268	9.632	10.019	10.444	0.71%
Museums, historical sites, zoos, and parks	0.73	0.769	0.809	0.852	0.898	0.06%
Amusement, gambling, and recreation	12.563	13.109	13.668	14.251	14.879	1.00%
Accommodation	19.391	20.039	20.705	21.405	22.176	1.57%
Food services and drinking places	34.885	36.096	37.346	38.645	40.052	2.81%

Source: Spectrum Gaming Group, Regional Economic Models Inc.

The economic growth shown in the above table also means tax revenue growth for the state. The next table shows total and selected revenue sources over time.

Figure 173: Projected tax revenues in Florida from different gambling-related sources, Tax-PI standard baseline forecast (in millions of current dollars)

Revenues	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
Total	*66.24*	*66.622*	*67.896*	*69.617*	*72.195*	*74.99*
Gaming Taxes	0.182	0.202	0.217	0.22	0.223	0.224
Sales/Use	20.553	21.561	22.75	23.975	25.236	26.509
Lottery	1.757	1.762	1.777	1.803	1.828	1.853
Compact Revenues	0.222	0.226	0.227	0.114	0.11	0.11
All Other	43.526	42.871	42.925	43.505	44.798	46.294
Revenues	**FY2019**	**FY2020**	**FY2021**	**FY2022**	**FY2023**	**FY2024**
Total	*77.887*	*80.774*	*83.964*	*87.258*	*90.679*	*94.254*
Gaming Taxes	0.226	0.228	0.23	0.233	0.235	0.237
Sales/Use	27.893	29.34	30.848	32.432	34.098	35.848
Lottery	1.877	1.902	1.926	1.95	1.974	1.999
Compact Revenues	0.112	0.112	0.114	0.116	0.119	0.121
All Other	47.779	49.192	50.846	52.527	54.253	56.049

Source: Spectrum Gaming Group, Regional Economic Models Inc.

Overall, state-level projections suggest that over the long-term, Florida's economy will be healthy. As a well-developed state economy, new industries would be expected to enhance the economic profile of the state. As the projections at the county-level in the previous parts of this report suggest, the expansion of casinos is most likely to have at least a mildly positive impact on the state's economy. We find no evidence from the analysis in Part 2 of this study that casinos would cause harm to either county-level or the state-level economy, in aggregate.

VIII. Summary and Conclusions

The analysis in this report complements the other parts of the Florida Gaming Study. In Part 2, we were tasked with examining the relationships between casinos and key economic variables, at a county-level. Two primary variables that are key indicators of economic health at the local level, are employment and wages.

Changes in employment and wages have a significant impact on other variables in a local economy. For example, as employment and wages increases, the economy grows: production increases and standards of living rise. A key component of Part 2 has been to project the relationship between the expansion of legalized gambling and employment and wages in host counties.

In order to evaluate the overall business climate in regions surrounding casinos, we also analyze a county-level measure of the number of business establishments operating in the county. Analysis of this variable provides a geospatial perspective on the impact of casinos, and whether casinos foster growth in other industries, or whether they "cannibalize" other firms in close proximity.

Our analysis uses quarterly data from the Bureau of Labor Statistics (Quarterly Census of Employment and Wages) from 2002 through 2012. We use these data to project the likely impact of introducing casinos in selected counties, as well as expanding pari-mutuels in the state to include slot-machine (or other EGMs) casinos. Our projections are based on two different analyses.

First, when available, we utilized estimated effects of casinos from a previously published study. The 2008 report by Cotti estimated county-level impacts on wages and employment from casinos across the county. Cotti analyzed all US counties, except Nevada and New Jersey, to provide empirical estimates of the casino effect. Cotti's casino effect estimates are the best available because they are based on a dataset that is not otherwise available, and he controls for a variety of economic and demographic factors. His findings were that casinos tend to have a positive impact on both variables, but these benefits decrease the larger the county (in terms of population). This makes intuitive sense, because a particular casino will be a smaller component of a larger local economy. We would expect greater economic benefits (in percentage terms) from casinos located in less populated areas.

Second, in the cases where Cotti did not provide estimated impacts, e.g., changes in number of establishments due to casino introduction, we analyzed the impact of casino introduction in peer counties. The peer counties were chosen to match with prospective Florida counties based on population, and casino or racino experience. We utilize the estimated change in economic variable from before to after the casino began operation to develop projections for Florida counties.

Overall, our projections suggest that the introduction of casinos, whether stand-alone destination resorts, or addition of slot machines at existing pari-mutuels, will lead to modest economic benefits. In particular, we find that there would likely be a positive impact on average

weekly wages and employment in the leisure and hospitality sector, as well as "other services." ("Other services" is a sector classification that includes a wide variety of services that are not classified elsewhere in the QCEW.) However, when we consider all industries within a county, we find little significant casino effect. (Technically, the estimated effects that we consider are not statistically different from zero.) This suggests that, while some industrial sectors see increases in employment and wages, these benefits are offset in a more macro setting. Nevertheless, when we consider the state-level projections by REMI, we see that overall the Florida state economy is projected to grow at a moderate rate into the foreseeable future. Casinos would likely contribute to that, based on our analysis. Although the data suggest that employment and wage benefits that accrue to certain sectors may be offset by decreases in others (resulting in no net effect when considering all sectors), casinos may still be a driver of economic development since they provide a service that is valued by consumers and can attract additional tourists (and tourist spending) to Florida.

When we evaluate the number of establishments that operate in casino counties, we find that casinos tend to contribute to increases in the number of establishments, whatever sector we consider (i.e., "other services," "leisure & hospitality," or "all industries). This suggests that casinos may help spur additional economic development in their immediate vicinity, even in consideration of the fact that there are obviously some firms and industry that must compete with casinos.

Based on our evaluation of the data and our projections, our conclusion is that casinos play the same role that other businesses do in a local economy. Since they rely on mutually beneficial voluntary transactions with consumers, both parties to the transaction benefit (i.e., the casino makes a profit, and casino patrons enjoy casino entertainment), and this activity is the foundation to economic development. In this sense, casinos can play as important role in the development of a local economy as any other firm. To their advantage, of course, is their ability to attract tourists who might not otherwise visit a region.

Of course, there are also potential negative consequences to expanding legalized gambling in Florida. Many of these issues, such as social costs, were discussed in Part 1B of the study; it was not our charge to consider those issues in Part 2 of the report.

Appendix I: Analysis of Literature Regarding Social Impacts

One of our primary goals for this report is to provide an original systematic review of literature related to gambling expansion, and the social impacts (in this case, gambling behavior and gambling-related problems) that gambling expansion has on population segments. In this section, we provide a quantitative analysis of selected peer-reviewed and gray literature that we assessed for methodological quality, extent of gambling expansion, and extent of social impact. We then review and discuss this information with respect to the expansion scenarios that Florida is considering.

A. Procedures

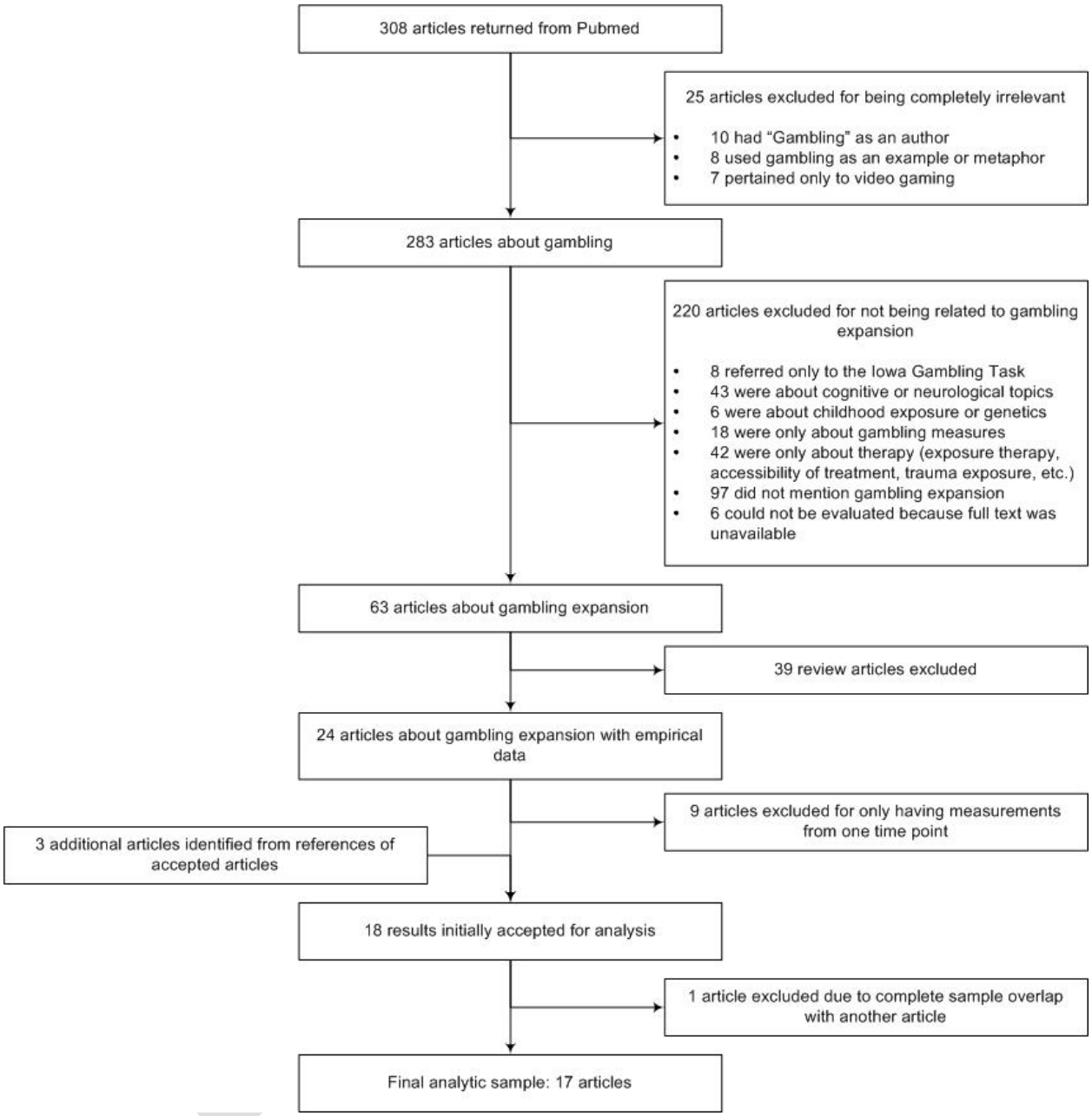
Peer-Reviewed Literature

We performed a Pubmed[422] search using the search terms (Problem OR pathological OR disordered OR compulsive) AND (gambling OR gaming) AND (expansion OR casino OR exposure OR opening OR establish* OR availability OR access OR accessibility) NOT Parkinson's, and filtering for English-only results. This search returned 308 articles. Figure 174 below presents a CONSORT diagram describing the number of articles accepted and rejected, along with reasons for acceptance and rejection. As Figure 174 shows, 25 results were completely irrelevant and unrelated to gambling. We then reviewed the remaining 283 about gambling. Of these, we excluded 220 articles because they were not directly related to gambling expansion. Next, we excluded 39 review articles that addressed the topic of gambling expansion but did not present new empirical data. Of the remaining 24 empirical studies about gambling expansion, nine had measurements from only one time point; we excluded these studies yielding a sample of 15 articles. One of these articles was later excluded when it was determined that its sample overlapped completely with another article within the sample. Therefore, the Pubmed search resulted in 14 unique studies.

To maximize the number of articles in our analyses, we reviewed the references included in these 14 articles and the 39 reviews to locate additional appropriate articles that our Pubmed search might not have detected. Through these citation reviews, we identified three additional articles that fit our analytic inclusion parameters, yielding a final analytic sample of 17 articles. A full list of included studies is in Appendix II.

[422] For this report, we used Pubmed as the primary scientific search engine. Searches completed using alternative search engines (e.g., PsycInfo, Pubget, Google Scholar, etc.) might yield different outcomes.

Figure 174: CONSORT diagram for gambling expansion peer-reviewed articles



Gray Literature

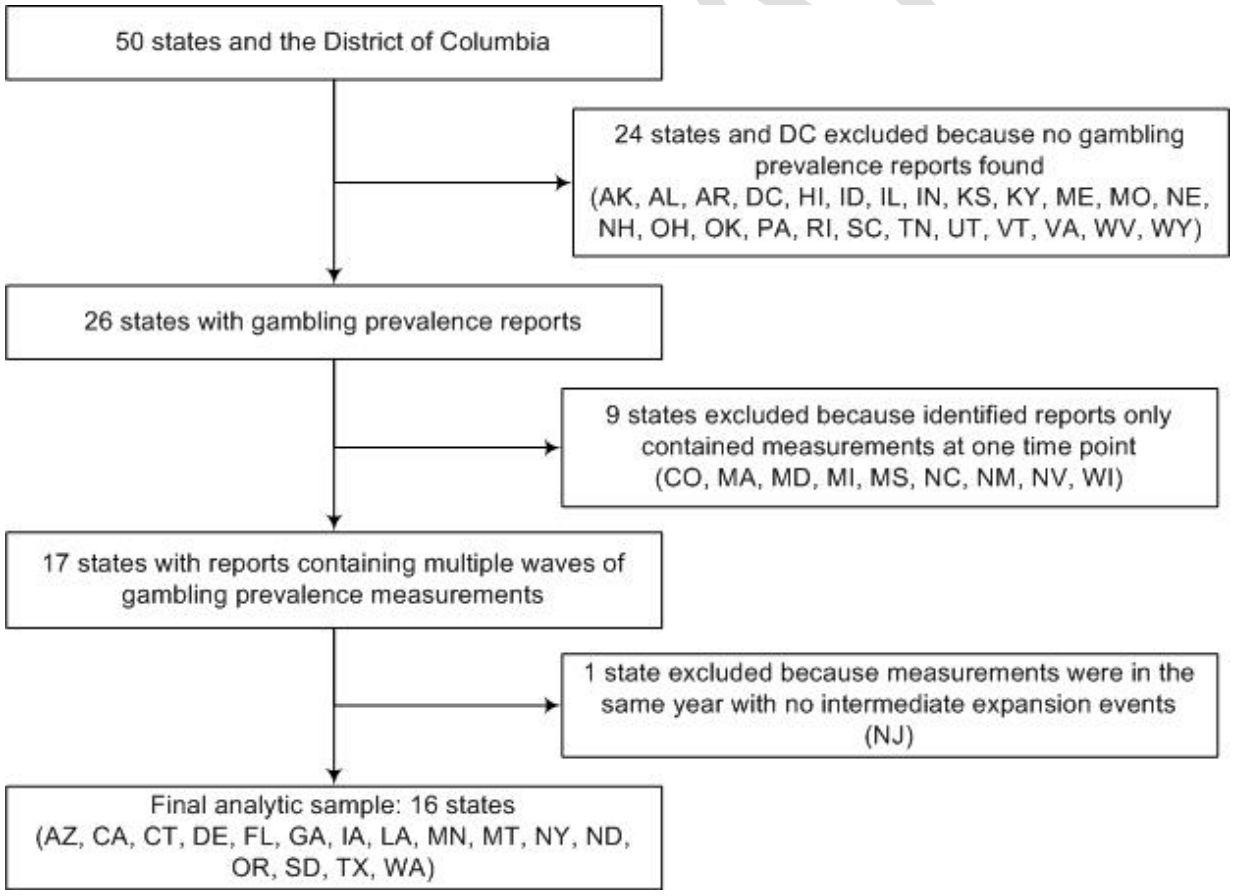
We also performed a search for gray literature (e.g., articles, reports and other documents that have not been subjected to traditional academic peer-review) related to gambling expansion by querying various sources. We began by collecting US reports listed on the Alberta Gambling Research Institute website[423] The Alberta Gambling Research Institute maintains a listing of

[423] http://www.abgamblinginstitute.ualberta.ca/LibraryResources/ReferenceSources/PrevalenceUnitedStates.aspx

government reports related to gambling and pathological gambling by state. At the same time, we ran Google and Google Scholar searches using the following search query (Problem OR pathological OR disordered OR compulsive) AND (gambling OR gaming) AND (rates OR prevalence OR incidence) AND [State name]. We repeated this search for all states. This resulted in an initial sample of 34 US reports from 26 states. Some report sets were not eligible for inclusion in our assessment. For example, some states had results only from one time point; therefore, we were unable to assess gambling expansion-related social impact changes. After obtaining and reviewing these sources, we maximized our inclusion list by locating other relevant reports from the references cited within the reports. This process resulted in the identification of another 13 reports.

As Figure 175 summarizes, our final analytic sample for gray literature reports consisted of 44 reports from 16 states. A full list of included studies is in Appendix III.

Figure 175: CONSORT diagram for gambling expansion state reports



Coding

Two members of the research staff coded the peer-reviewed publications (N=17) for methodological quality, overlapping on just over half (n=10). We calculated percent agreement, and, where possible, kappa, between coders for 10 different categories:

- Design
  - 1=prospective; 2=cross-sectional; 3=both (w/ results reported for both)
- Number of data collection time points
- Control group
  - 1=no control group; 2=non-equivalent control group; 3 = actual control group
- Population
  - 1=some sort of general population; 2=some sort of population of gamblers (including gamblers in treatment); 3=online or marketing panel; 4=other
- Sampling
  - 1=Simple random; 2=Random at the level of household (i.e., individual selected from within the randomly selected household); 3=stratified or cluster design; 4=convenience, but not self-selected; 5=self-selected (e.g., sign up or respond to ad); 6 = other
- Data collection
  - 1 = Self-report; 2 = Observation; 3 = Actual gambling behavior; 4 = Review of records
- Gambling measures
  - 1 = SOGS; 2 = NODS; 3 = PGSI/CPGI; 4 = GA's 20 questions; 5 = DSM-IV screen; 6 = Lie-Bet; 7 = Other
- N at each wave
  - (only percent agreement calculated)
- Response rate
  - (only percent agreement calculated)
- Retention rate
  - (only percent agreement calculated)

For each category, a third coder reviewed all situations in which the two primary coders disagreed and assigned a final code. This coding procedure has been used successfully in other studies that summarize a body of literature.[424]

We used the same basic procedure for the gray (i.e., state report) literature. In this case, because evaluation of expansion-related impacts often involved multiple reports, the two primary

[424] Howard J. Shaffer et al., "The Epidemiology of College Alcohol and Gambling Policies," *Journal of Harm Reduction* 2, no. 1 (2005), http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=549515&blobtype=pdf; Shaffer and Hall, "Updating and Refining Meta-Analytic Prevalence Estimates of Disordered Gambling Behaviour in the United States and Canada; Howard J. Shaffer, Matthew N. Hall and Joni Vander Bilt, "Estimating the Prevalence of Disordered Gambling Behavior in the United States and Canada: A Meta-Analysis," (Boston: Presidents and Fellows of Harvard College, 1997); Shaffer, Hall and Vander Bilt, "Estimating the Prevalence of Disordered Gambling Behavior in the United States and Canada: A Research Synthesis."

coders coded each state instead of each report (e.g., if a state had three cross-sectional reports, one before expansion and two after, the coders considered this to be a cross-sectional design with three time points). If a state had different sets of reports for different populations (e.g., adult and adolescent), the coders considered these report sets separately. For the state report literature, the coders again overlapped on half (n=8) of the 16 states with expansion-related reports. Again, a third coder resolved discrepancies and assigned final codes.

Outcome and Expansion Event Extraction. In addition to coding methodological quality, for both the peer review and state literature, three coders extracted information from each article about rates of gambling participation, subclinical gambling problems, and disordered (i.e., pathological) gambling at each study wave, as well as the significance of differences in rates between waves. For the peer review literature, coders also independently assessed the expansion event(s) mentioned in the article. Coder pairs again overlapped on just over half of the articles and reports in determining outcomes, and a non-primary coder again resolved discrepancies.

The state report literature did not always describe the specific expansion events that occurred between reports. Consequently, we employed a fourth coder who had not been involved in rating methodological quality or outcome to conduct web searches and place calls to gambling venues to determine the nature of the within-state gambling changes that occurred between reports.

Methodological Quality Reduction. Based on the methodological coding and outcome extraction, we assigned each peer review article and each set of state reports a methodological quality score as follows:

- 1 point for studies that used longitudinal designs
- 1 point per follow-up wave beyond baseline
- 1 point for a non-equivalent control group design; 2 points for an actual control group
- 1 point for general population
- 1 point for stratified design; 2 points for random or random at household level design
- 1 point for initial N>1000 total for cross-sectional studies, initial N>400 total for longitudinal studies (i.e., ensuring power ~80% to detect differences of 3% in PG rates)
- 1 point for averaged response rates >=70%
- 1 point for averaged retention rates >=70%
- 1 point for all prevalence rates measured in past year or more recent time span

Expansion Event Reduction. Based on the extracted events, we grouped the interval between each wave of each peer review article and each set of state reports by applying the following categories:

- Casinos – new introduction
- Casinos – expansion
- EGM /slots parlor – new introduction
- EGM/slots parlor – expansion
- Lottery – new introduction

- Lottery – expansion
- Internet gambling – new introduction
- Internet gambling – expansion
- Horse/dog race betting – new introduction
- Horse/dog race betting – expansion

This grouping allowed us to assign gambling expansion scores (excluding retraction studies) as follows:

- 1 point for the addition of one type of gambling
- 2 points for the addition of two types of gambling
- 3 points for the addition of more than two types of gambling
- 1 point for one venue added
- 2 points for two venues added
- 3 points for more than two venues added
- 1 point for gambling expansion
- 2 points for gambling introduction

B. Analysis

Coding Reliability – Peer-Review Literature

As described above in the Coding section, two researchers coded the 17 peer review articles for methodological quality, overlapping on 10 articles. For these overlapping articles, we calculated coder reliability in terms of percent agreement and, where possible, kappa[425] for the 10 methodological categories.

For time points, control group, data collection, gambling measures, response rate and study N, percent agreement ranged from 88 percent to 100 percent. Kappas, for those categories that permitted a calculation, ranged from 0.76 to 1.0. For design, percent agreement was 70 percent, but kappa was low (0.25) due to the paucity of data points. In this case, the third coder who reviewed discrepancies determined that the first coder inadvertently had entered the wrong code number for two studies. Coders were in 100 percent agreement about design after review. For population and sampling, percent agreement ranged from 58 percent to 74 percent and kappas were 0.40 for both categories when all coding options were considered. However, when we combined the coding options for these categories into broader categorizations, general population vs. other and random, household, or stratified sample vs. other, percent agreement increased to 89 percent for population and 95 percent for sampling; kappa increased to 0.69 and 0.85 respectively. This alteration for population coding retained the categories necessary for assessing methodological quality. For sampling, we decided to retain separation of the household and stratified sample categories. The third coder in this case identified a systematic coding difference between the first and second coder; all coders were in agreement about the third coder's resolution. Finally, the two

[425] Kappa is a measure of agreement that is used with categorical variables.

coders did not agree on the calculation of retention rates for one of the two longitudinal studies on which they overlapped. The first coder calculated the retention rates using the "eligible sample" from baseline dictated by the authors – these were individuals from the baseline wave who agreed to be interviewed at a later time point. The second coder calculated the retention rates using the entire baseline sample. The third coder reviewed this discrepancy and all coders agreed to accept the second coder's definition.

For outcome extractions, the two coders assessed the type of outcome (e.g., lifetime, past year) and the value of the outcome (e.g., 1.9 percent with SOGS score of 5+). On outcome type, percent agreement was 80 percent and kappa was 0.68. The third coder resolved discrepancies and all coders agreed with the resolution. For outcome values, the coders agreed on 69 of the 83 values they extracted (83 percent). Again, the third coder resolved discrepancies and all coders agreed with the resolution.

Analytic Review – Peer-Review Literature

Figure 77 below summarizes the results from our peer review literature analysis. Our methodological quality scale scores could range from 0-13. Our coding indicated that the 17 available gambling expansion studies' methodological quality actually ranged from 1-10. Nine studies had scores of 5 or less, and eight had scores greater than 5. Our coding indicated that the 17 available gambling expansion studies' gambling expansion scores, calculated between each wave, ranged from 3-8.

Participation – Peer Review Literature. With respect to overall gambling participation, we observed that nine studies did not report this outcome. Three studies reported this outcome, but did not include any statistical test of change. Among those that reported statistical tests for changes in gambling participation, one study indicated no change following gambling expansion, and 4 indicated some change. Three of the four that indicated a change suggested an overall decrease in gambling participation, and one indicated an increase. It is important to note that one study (i.e., Lund, 2009) indicating a decrease in gambling participation examined gambling retraction, rather than gambling expansion.

The methodological quality of the one study that indicated a significant increase (Ladouceur et al., 1999) was 5, whereas the average methodological quality of the two studies that indicated a significant decrease (excluding the study of gambling retraction – Lund, 2009) was 5.5. The methodological quality of the study that indicated no change (Room et al., 1999) was 7. The average methodological quality among those studies that reported no statistical test of change was 7.

The gambling expansion score for the study that indicated a significant increase in gambling participation (Ladouceur et al., 1999) was 7, and the average expansion score among those that indicated a significant decrease (excluding the study of gambling retraction – Lund, 2009) was also 7. The gambling expansion score of the study that indicated no change (Room et

al., 1999) was 4. The average expansion score among those studies that reported no statistical test of change was 4.7.

Problems – Peer Review Literature. With respect to problem gambling (i.e., Level 2 gambling), we observed that eight studies did not report this outcome. One study reported this outcome, but did not include any statistical test of change. Among those that reported statistical tests for problem gambling changes, seven indicated no change following gambling expansion. One study (i.e., Lund, 2009) indicated no reduction in problem gambling following gambling retraction, and one indicated an increase. The study that indicated an increase (i.e., Black et al. 2012) found an increase in problem gambling between two waves of data, but no increase between wave 2 and 3, though expansion continued between those waves.

The methodological quality for the study that indicated an increase was 4. The average methodological quality among those studies that indicated no change was 6.3. The methodological quality for the study that reported no statistical test of change was 7.

The gambling expansion score for the study that indicated a significant increase for problem gambling over time (Black et al., 2012) was 7 between the first two waves and 5 between waves 2 and 3. The average gambling expansion score among those studies that indicated no change was 5.9. The expansion score for the study that reported no statistical test of change was 4.

Gambling Disorder – Peer Review Literature. With respect to gambling disorder (i.e., Level 3 gambling), we observed that six of the 17 studies did not report this outcome. Three studies reported upon this outcome, but did not include any statistical test of change. Among those that reported statistical tests for gambling disorder changes, five indicated no change on any outcome following gambling expansion, and three indicated some change. Specifically, one study reported an increase in lifetime rates and no change in past year rates (Abbott et al., 2013); another reported an increase between two waves of data but no increase between wave 2 and 3, though expansion continued between those waves (Black et al., 2012); and, finally, one study of gambling retraction (Lund, 2009) reported a decrease over time.

The average methodological quality among those studies that indicated a significant increase was 4.5, whereas the average methodological quality of those that indicated a significant decrease (excluding the study of gambling retraction) was 5.5. The average methodological quality among those studies that indicated no change on an outcome was 5.8. The average methodological quality among those studies that reported no statistical test of change was 4.7.

The gambling expansion score for the study with mixed findings (i.e., Abbott et al., 2013) was 8. The expansion score for the study that reported an increase over time (i.e., Black et al., 2012) was 7; and for the study of gambling retraction – no gambling expansion score was given. The average gambling expansion score among those studies that indicated no change was 5.4. The average expansion score among those studies that reported no statistical test of change was 5.5.

Other Impact – Peer Review Literature. A number of studies reported outcomes of unknown psychometric quality. It is unclear whether the reliability and validity of these outcomes are satisfactory; however, for completeness of reporting, we include these findings here.

With respect to other gambling expansion social impact (i.e., varied outcomes, such as study-specific surveys), we observed that nine studies did not report this outcome. Two studies reported this outcome, but did not include any statistical test of change. Among those that reported statistical tests for changes in other outcomes, one indicated a decrease following gambling retraction. Five studies indicated activity increases on at least one variable.

The average methodological quality among those studies that indicated a significant increase was 5.2. The average methodological quality among those studies that reported no statistical test of change was 5. The average methodological quality of studies that did not report other study-specific outcomes was 5.

The gambling expansion score for the studies that indicated a significant increase in other gambling expansion social impact was 5. The average expansion score among those studies that reported no statistical test of change was 4.

Exploratory Associations – Peer Review Literature. We examined the relationships between quality, expansion and rates of change for the clinical outcomes (i.e., post minus pre expansion rate; positive scores indicating increases in problem rates) evidenced by the gambling expansion peer review literature. To explore these relationships, first, we calculated the correlation between the 16 methodological quality scores and the 16 gambling expansion scores (averaged across waves) for those studies that examined gambling expansion (excluding the single gambling retraction study). We found that methodological quality scores and gambling expansion scores were inversely related (r=-0.43), indicating that research quality decreased for studies that reported more extensive gambling expansion.

Next, we calculated the correlation between interwave change scores (from the 10 studies of expansion that reported subclinical gambling problem rates or disordered gambling rates) and their associated methodological quality scores. For past year and lifetime level 3 gambling problems, methodological quality scores were inversely related to changes in prevalence (r=-0.37 and -0.71, respectively), indicating that research quality was lower for studies reporting larger changes. The same was true for lifetime level 2 rates (r=-0.22), but there was no relationship to past year level 2 rates (r=-0.03). Last, we calculated the same sets of correlations between interwave change scores and each interwave gambling expansion score. We found a positive relationship between level 2 and level 3 rate changes and gambling expansion: r=0.11 for past year level 2 rate changes, r=0.18 for lifetime level 3 rate changes, r=0.46 for lifetime level 2 rate changes, and r=0.57 for level 3 rate changes. Ns for each comparison ranged from 5 to 8, and none of the correlations were statistically significant, so these associations should be interpreted with a high degree of caution.

Summary – Peer Review Literature. The study with the highest methodological quality (i.e., Jacques & Ladouceur, 2006) examined a single gambling expansion event (i.e., opening one casino) and indicated, across four waves of data collection, no overall changes in problem gambling or gambling disorder in the target community compared to a control community. The study with the highest gambling expansion score (i.e., Abbott et al., 2013) examined the introduction and expansion of multiple types of gambling in multiple venues and indicated mixed results. Specifically, they reported reductions in gambling participation, no changes in lifetime or past year problem gambling, and increase in lifetime gambling disorder, but no change in past year gambling disorder.

Of all the outcomes reported, regardless of study, quality or outcome, 15 indicated no overall statistically significant change in activity (e.g., participation or problems) after gambling expansion, five showed a decrease in activity (excluding the gambling retraction study), and 10 indicated an increase in activity. Those that indicated an increase in gambling-related activities tended (i.e., 6 of 10) to report outcomes that were not derived from psychometrically tested measures (e.g., PGSI or SOGS), but rather idiosyncratic variables of unknown applicability. Increases associated specifically with validated measures of gambling-related problem measures either were mixed (i.e., Abbott et al., 2013) or non-linear (i.e., Black et al., 2012). There *was* an apparent positive association between levels of gambling expansion change in gambling problem rates. However, the association was not statistically significant because of the small number of comparisons and should be interpreted with caution. Visual inspection of rates on which the associations were based indicates that more expansion tended to be associated with slightly less decrease in rates across time, rather than actual increase.

The available peer-reviewed literature does not provide conclusive evidence of a relationship between gambling expansion and gambling-related problems. Currently, the findings are mixed and vary by the type of outcome under consideration. Unfortunately, an association between study quality and the amount of change reported further complicates and limits our ability to interpret the extant literature. Some research suggests that expansion might instigate problems; however, the majority of evidence indicates otherwise. Nonetheless, the number of findings that indicate expansion has no effect, or even a regressive long-term effect is too small to say definitively that no relationship exists between gambling expansion and gambling-related problems. The most cautious approach to this issue would be to collect additional original high-quality prospective longitudinal data, to add to and clarify the existing body of literature.

Figure 176: Peer review expansion literature

Study	Methodological Quality (design+waves+control +population+sampling +N+response+retention+timeframe)	Expansion Events (# of venues) (expansion score – see expansion coding section)	Gambling Participation Rate (W1%/W2%/W3%/ W4%)	Subclinical Gambling Problem Rate (W1%/W2%/W3%/ W4%)	Disordered Gambling Rate (W1%/W2%/W3%/ W4%)	Other Outcome (W1/W2/W3/W4)
Abbott, Romild & Volberg (2013)	(0+1+0+1+1+1+0+0+1) =5	<u>*W1-W2*</u> Casinos – introduced (4) EGMs – expansion Internet gambling – introduced Horse/dog betting – expansion (3+3+2)= 8	PY: 88*/72* P30: 69*/53*	LT: 2.7/2.5 PY: 1.4/1.3	LT: 1.2*/2.0* PY: 0.6/0.9	
Black, McCormick, Losch, Shaw, Lutz & Allen (2012)	(0+2+0+1+1+0+0+0+0) =4	<u>*W1-W2*</u> Casinos – introduced (7) Horse/dog betting – expansion (2+3+2)=7 <u>*W2-W3*</u> Casinos – expansion (21) (1+3+1)=5		LT: 1.6*/3.5/2.2*	LT: 0.1*/1.9/1.4*	
Bondolfi, Jermann, Ferrero, Zullino, & Osiek (2008)	(0+1+0+1+1+1+0+0+1) =5	<u>*W1-W2*</u> Casinos – introduced (19) (1+3+2)=6		LT: 2.2/2.2 PY: 1.0/0.8	LT: 0.8/1.1 PY: 0.2/0.5	
Govoni , Frisch, Rupcich & Getty (1998)	(0+1+0+1+2+1+0+0+1) =6	<u>*W1-W2*</u> Casinos – introduced (1) (1+1+2)=4	PY~: 66/62	PY: 1.5/1.1	PY: 0.8/1.1	
Grun & McKeigue (2000)	(0+1+0+1+1+1+0+0+1) =5	<u>*W1-W2*</u> Lottery – introduced (1+3+2)=6	P14~: 40/75			<u>*% gambling>20£ per week*</u> P14: 0.8*/2.5* <u>*% gambling>10% of income*</u> P14: 0.4*/1.7*
Jacques & Ladouceur (2006)	(1+3+1+1+2+1+0+0+1) =10	<u>*W1-W2*</u> Casinos – introduced (1) (1+1+2)=4	<u>*Target*</u> PY~: 90/91/90/89 <u>*Control*</u> PY~: 90/92/93/92	<u>*Target*</u> PY: 2.1/2.4/1.5/1.5 <u>*Control*</u> PY: 1.6/1.7/1.2/0.9	<u>*Target*</u> PY: 1.4/1.8/1.5/1.0 <u>*Control*</u> PY: 0.5/0.5/0.0/0.4	

(continued on next page)

Figure 176 (continued)

Study	Methodological Quality (design+waves+control +population+sampling+ N+response+retention +timeframe)	Expansion Events (# of venues) (expansion score – see expansion coding section)	Gambling Participation Rate (W1%/W2%/W3%/ W4%)	Subclinical Gambling Problem Rate (W1%/W2%/W3%/ W4%)	Disordered Gambling Rate (W1%/W2%/W3%/ W4%)	Other Outcome (W1/W2/W3/W4)
Jason, Taff & Boglioli (1990)	(0+4+0+0+0+1+0+0+1) =6	*W2-W3* Casino – expansion (1) (1+1+1)=3 *W3-W4* Casino – expansion (1) (1+1+1)=3				*Casino-related Deaths* PY~: 66/67/80/86/99
LaBrie, Nelson, LaPlante, Peller, Caro & Shaffer (2007)	(0+1+1+1+0+1+0+0+1) =5	*W1-W2* Casinos – introduced (2) (1+2+2)=5				*Target PY %SEs added* 44**;41**/56**;59** *Control PY %SEs added* 64**;62**;72;46/36**;38**;28;54
Ladouceur, Jacques, Ferland & Giroux (1999)	(0+1+0+1+2+1+0+0+0) =5	Casino – introduced (3) Lottery – expansion (2+3+2)=7	PY: 54**/63**	LT: 2.1/2.4	LT: 1.2/2.1	
Ladouceur, Jacques, Chevalier, Sévigny, Hamel (2005)	(0+1+0+1+2+1+0+0+1) =6	*W1-W2* VLT – expansion Casino – expansion (1) (2+3+1)=6	PY: 90*/81*	PY: 1.4/0.9	PY: 1.0/0.8	
Lund (2009)	(1+1+0+0+2+1+0+1+1) =7	*W1-W2* EGMs – banned (NA)	P90: 97**/78**	P90: 4.9/3.7	P90: 1.0*/0.4*	*P90 Lie & Bet (from Lie Bet)* 4.9/3.7 *P90 Lie, Bet, & Chase* 1.0*/0.4*
Lupu & Todirita (2013)	(0+1+0+0+0+0+0+0+0) =1	*W1-W2* EGMs – expansion Internet gambling – introduced (2+3+2)=7		LT~: NA/23.5	LT~: 6.8/3.5	
Room, Turner & Ialomiteanu (1999)	(1+1+1+1+2+0+0+0+1) =7	*W1-W2* Casinos – introduced (1) (1+1+2)=4	*Target* PY: 87/87 *Control* PY: 86/85	*Target* PY~: 2.5/4.4 *Control* PY: unmeasured	*Target* PY~: 1.0/0.4 *Control* PY: unmeasured	*Target PY SOGS score* 0.13*/0.20* *Control PY SOGS score* NA/0.14*
Shepherd, Gohdes, London (1998)	(1+2+0+1+2+0+0+0+0) =6	*W1-W2* Lottery – introduced (1+3+2)=6				*# of DSM criteria endorsed (timeframe unclear)* 0.13*/0.24*/0.25*

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Figure 176 (continued)

Study	Methodological Quality (design+waves+control +population+sampling+ N+response+retention +timeframe)	Expansion Events (# of venues) (expansion score – see expansion coding section)	Gambling Participation Rate (W1%/W2%/W3%/ W4%)	Subclinical Gambling Problem Rate (W1%/W2%/W3%/ W4%)	Disordered Gambling Rate (W1%/W2%/W3%/ W4%)	Other Outcome (W1/W2/W3/W4)
Slutske (2006)	(0+1+0+1+2+1+1+0+0) =6	*W1-W2* Casino – expansion Lottery – expansion (2+3+1)=6			LT~: 0.8/0.4	
Toneatto, Ferguson & Brennan (2003)	(0+2+0+0+0+0+1+0+0) =3	*W1-W2* Casino – introduced (1) (1+1+2)=4				*LT SOGS Score* No descriptives reported; SOGS score increased significantly across time points, but only for card players
Xian, Scherrer, Slutske, Shah, Volberg & Eisen (2007)	(1+1+0+0+0+1+1+1+0) =5	*W1-W2* Casinos – expansion Lottery – expansion (2+3+1)=6				*LT 1+ DSM criteria* 19.8/NA *PY 1+ DSM criteria* NA/8.2 *% variance accounted for by unique environmental factors* 13~/30~

Where LT=lifetime; PY=past year; P90=past 90 days; P14=past 14 days; W=wave; SE=casino self-excluders; NA=not applicable (not measured). * Rates differ significantly from each other, $p < .05$. ** Rates differ significantly from each other, $p < .01$. ** Rates differ significantly from each other, $p < .001$. ~Difference between rates not tested.

Coding Reliability – Gray Literature

As the Coding section above describes, two researchers coded reports from the 16 included states for methodological quality, overlapping on eight states. For these overlapping states, we calculated coder reliability in terms of percent agreement and, where possible, kappa, for the 10 methodological categories.

For design, time points, control group, population, data collection, gambling measures, response rate and study N, percent agreement ranged from 83 percent to 100 percent. Kappas for those categories, which permitted a calculation, ranged from 0.65 to 1.0. For sampling, percent agreement was 63 percent and kappa was 0.31 when all coding options were considered. However, when we combined the coding options for this category into broader categorizations: random, household or stratified sample vs. other, percent agreement increased to 79 percent though kappa remained low. The third coder resolved discrepancies for sampling; all coders were in agreement about the third coder's resolution.

For outcome extractions, the two coders assessed the type of outcome (e.g., lifetime, past year) and the value of the outcome (e.g., 1.9 percent with SOGS score of 5+). On outcome type, percent agreement was 77 percent and kappa was 0.66. The third coder resolved discrepancies and all coders agreed with the resolution. For outcome values, the coders agreed on 64 of the 85 values they extracted (75 percent). Again, the third coder resolved discrepancies, and all coders agreed with the resolution.

Analytic Review – Gray Literature

Figure 78 below summarizes the results from our gray (i.e., state reports) literature analysis. Our methodological quality scale scores could range from 0-12. Our coding indicated that the 19 state report sets' methodological quality actually ranged from 2-6. Fifteen states had scores of 5 or less, and four had scores greater than 5. Our coding indicated that the 19 states' gambling expansion scores, calculated between each wave, ranged from 4-8.

Participation – Gray Literature. With respect to overall gambling participation, we observed that two state report sets did not report this outcome. Six report sets reported this outcome, but did not include any statistical test of change. Among those that reported statistical tests for changes in gambling participation, three indicated no change following gambling expansion, and eight indicated some change. Four of the eight that indicated a change suggested an overall decrease in gambling participation and four indicated an increase.

The average methodological quality among those state report sets that indicated a significant increase was 5, whereas the average methodological quality of those that indicated a significant decrease was 5.5. The average methodological quality among those reports that indicated no change was 5. The average methodological quality among those reports that reported no statistical test of change was 4.2.

The gambling expansion score for the states that indicated a significant increase in gambling participation was 7.3, and the average expansion score among those that indicated a significant decrease was 5.5. The average gambling expansion score among those state report sets that indicated no change was 7. The average expansion score among those reports that reported no statistical test of change was 6.1.

Problems – Gray Literature. With respect to problem gambling (i.e., Level 2 gambling) rate changes, we observed that two state report sets did not report this outcome. Five states reported this outcome, but did not include any statistical test of change. Among those that reported statistical tests for problem gambling changes, nine indicated no change following gambling expansion. Three states reported an increase in problem gambling following expansion. No states reported decreases in problem gambling.

The average methodological quality for the report sets that indicated increased problem gambling was 4.7. The average methodological quality among those report sets that indicated no change was 4.3. The average methodological quality for the report sets that reported no statistical test of change was 4.6.

The average gambling expansion score for the report sets that indicated increased problem gambling was 7.3. The average gambling expansion score among those reports that indicated no change was 6.4. The expansion score for the report sets that reported no statistical test of change was 6.3.

Gambling Disorder – Gray Literature. With respect to gambling disorder (i.e., Level 3 gambling) rate changes, we observed that two of the 19 state report sets did not report this outcome. Six report sets reported upon this outcome, but did not include any statistical test of change. Among those that reported statistical tests for gambling disorder changes, eight indicated no change following gambling expansion, and four indicated some change. Specifically, report sets from Iowa, Montana, New York and North Dakota reported an increase in rates.

The average methodological quality among those report sets that indicated a significant increase was 4.5. The average methodological quality among those report sets that indicated no change on an outcome was 4.4. The average methodological quality among those report sets that reported no statistical test of change was 4.5.

The average gambling expansion score for report sets that indicated an increase in gambling disorders was 6.8. The average gambling expansion score among those reports that indicated no change was 6.6. The average expansion score among those reports that reported no statistical test of change was 6.3.

Other Impact – Gray Literature. We found that none of the state report sets reported only report-specific outcomes – all but two used accepted problem gambling and disordered gambling measures and rates. The two that didn't (adolescent reports for Florida and Arizona) did not include any problem rates measured at multiple time points.

Exploratory Associations – Gray Literature. We examined the relationships between quality, expansion and rates of change for the clinical outcomes (i.e., post minus pre expansion rate; positive scores indicating increases in problem rates) evidenced by the gambling expansion gray literature. To explore these relationships, first we calculated the correlation between the 18 methodological quality scores and the 18 gambling expansion scores (averaged across waves) for those state report sets that examined gambling expansion (excluding the single state, Arizona, that had only retraction). We found that methodological quality scores and gambling expansion scores were slightly positively related (r=0.15), indicating that for the state reports, research quality increased slightly for studies that reported more extensive gambling expansion.

Next, we calculated the correlation between interwave change scores (from the 17 state report sets that reported subclinical gambling problem rates or disordered gambling rates) and their associated methodological quality scores. For past year level 2 and lifetime level 3 gambling problems, methodological quality scores were positively related to changes in prevalence (r=0.45 and 0.31, respectively), indicating that research quality was higher for studies reporting larger changes. There was no relationship past year level 3 rates (r=-0.08) or lifetime level 2 rates (r=0.10). Last, we calculated the same sets of correlations between interwave change scores and each interwave gambling expansion score. We found a positive relationship between past year level 2 and lifetime level 3 rate changes and gambling expansion: r=0.28 for past year level 2 rate changes, r=0.31 for lifetime level 3 rate changes. There was no relationship between expansion and past year level 3 or lifetime level 2 rate chances, r=0.07 and 0.09, respectively. Ns for each comparison ranged from 11 to 20, and none of the correlations were statistically significant, so these associations should be interpreted with a high degree of caution.

Summary – Gray Literature. Again, as with the peer review literature, findings were mixed and the majority of state report sets found no significant changes in gambling problems after expansion. There was some preliminary evidence that the extent of expansion related positively to gambling problem rates, but the set of studies was too small to draw any strong conclusions. As with the peer review literature, the most cautious approach to this issue would be to collect additional original high-quality prospective longitudinal data to add to and clarify the existing body of literature.

Figure 177: Gray (i.e., state reports) expansion literature

Study	Methodological Quality (design+waves+control +population+sampling+ N+response+retention +timeframe)	Expansion Events (# of venues) (expansion score – see expansion coding section)	Gambling Participation Rate (W1%/W2%/W3%/ W4%)	Subclinical Gambling Problem Rate (W1%/W2%/W3%/ W4%)	Disordered Gambling Rate (W1%/W2%/W3%/ W4%)	Other Outcome (W1/W2/W3/W4)
Arizona (adolescents)	(0+2+0+0+0+1+0+0+0) =3	<u>*W1-W2*</u> No change (NA) <u>*W2-W3*</u> Horse/dog racing – decrease (-1) (NA)	PY~: 66/60/57			
California	(0+1+0+1+1+1+0+0+0) =4	<u>*W1-W2*</u> Casino – introduced (54) (1+3+2)=6	LT~: 89/83 PY: na/58	LT: na/2.2 PY: na/0.9	LT~: 1.2/1.5 PY: na/0.4	
Connecticut	(0+2+0+1+1+0+0+0+0) =4	<u>*W1-W2*</u> Casinos – introduced (1) (1+1+2)=4 <u>*W2-W3*</u> Casinos – expansion (1) Lottery – expansion Pari-mutuel – decrease (2+3+1)=6	LT: NA/96/NA PY~: NA/88/70	LT~: 3.6/4.2/2.2 PY~: NA/2.2/0.9	LT~: 2.7/1.2/1.5 PY~: NA/0.6/0.7	
Delaware	(0+1+0+1+2+1+0+0+0) =5	<u>*W1-W2*</u> EGM –expansion Lottery – expansion (2+3+1)=6	LT: NA/93 PY: NA/72 P18mo: 60/NA	PY: NA/0.4 P18mo: 3.5/NA	PY: NA/0.3 P18mo: 1.1/NA	
Florida: adolescents	(0+1+0+0+1+1+0+0+0) =3	<u>*W1-W2*</u> Casino – expansion (3) EGMs – introduced (2 racinos) Horse/dog racing – expansion (1) (3+3+2)=8	LT~: 68/NA PY~: 43/55	LT~: 4.9/NA PY~: 4.3/NA	LT~: 1.3/NA PY~: 1.1/NA	<u>*Gambling caused arguments w/ friends or family~*</u> NA/14.9
Georgia	(0+2+0+1+1+1+0+0+1) =5	<u>*W2-W3*</u> Internet gambling – introduced online lottery (2+3+2)=7	LT: 74/69*/88* PY~: 65/NA/85	LT~: 2.8/NA/2.6 PY~: 1.5/NA/1.1	LT~: 1.6/NA/1.4 PY~: 0.8/NA/0.4	<u>*Combined Level 2/3*</u> LT: 4.4/5.0/4.0 PY: 2.3/2.4/1.5

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Figure 177 (continued)

Study	Methodological Quality (design+waves+control +population+sampling+ N+response+retention +timeframe)	Expansion Events (# of venues) (expansion score – see expansion coding section)	Gambling Participation Rate (W1%/W2%/W3%/ W4%)	Subclinical Gambling Problem Rate (W1%/W2%/W3%/ W4%)	Disordered Gambling Rate (W1%/W2%/W3%/ W4%)	Other Outcome (W1/W2/W3/W4)
Iowa	(0+2+0+1+1+0+0+0+0) =4	*W1-W2* Casinos – introduced (7) Dog/horse betting – expansion (2+3+2)=7 *W2-W3* Casinos – expansion (21) (1+3+1)=5		LT: 1.6*/3.5/2.2*	LT: 0.1*/1.9/1.4*	
Louisiana	(0+3+0+1+1+1+0+0+0) =6	*W1-W2* EGMs – expansion Casinos – expansion (2) (2+3+1)=6 *W2-W3* Casino – expansion (2) (1+2+1)=4 *W3-W4* Casino – expansion (3) Racino – introduced (4) Horse/dog racing – decrease (-4) (2+3+2)=7	LT~: NA/70/68/NA PY~: 72/62/68/NA	LT~: 3.4/2.3/2.9/1.7	LT~: 1.4/1.6/1.6/1.4	
Minnesota	(0+1+0+1+1+1+1+0+1) =6	*W1-W2* Casino – expansion (9) Lottery – introduced Slots parlor – introduced (1) (3+3+2)=8	LT: 78*/83* PY: 64/65 P30: 23*/41*	PY: 1.6*/3.2*	PY: 0.9/1.2	
Montana	(0+1+0+1+1+1+0+0+1) =5	*W1-W2* Slots parlor – expansion Horse/dog racing – introduced (2+3+2)=7	LT~: 86/NA PY: 74/78	LT: 2.3/2.9 PY: 1.5/2.0	LT: 1.5*/2.8* PY: 0.7/1.6	

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Figure 177 (continued)

Study	Methodological Quality (design+waves+control +population+sampling+ N+response+retention +timeframe)	Expansion Events (# of venues) (expansion score – see expansion coding section)	Gambling Participation Rate (W1%/W2%/W3%/ W4%)	Subclinical Gambling Problem Rate (W1%/W2%/W3%/ W4%)	Disordered Gambling Rate (W1%/W2%/W3%/ W4%)	Other Outcome (W1/W2/W3/W4)
New York	(0+1+0+1+1+1+0+0+0) =4	*W1-W2* Casinos – introduced Lottery – expansion Horse/dog racing – expansion (3+3+2)=8	LT: 84*/90* PY~: NA/80	LT: 2.8*/4.7* PY~: NA/2.2	LT: 1.4*/2.6* PY~: NA/1.4	
North Dakota	(0+1+0+1+1+1+0+0+1) =5	*W1-W2* Casino – introduced (5) (1+3+2)=6	LT: 82/81 PY: 72/70	LT: 2.5/2.0 PY: 1.3/0.7	LT: 1.0*/1.8* PY: 0.7*/1.4*	
Oregon	(0+2+0+1+1+1+0+0+1) =6	*W1-W2* Horse/dog racing – decrease Casino - expansion (4) (1+3+1)=5 *W2-W3* Horse/dog racing – decrease (-1) Casino – expansion (2) (1+2+1)=4	LT: 87*/80*/83* PY: 70*/61*/65*	LT: 3.1/2.7/2.4 PY: 1.9/1.4/1.7	LT: 1.8/1.9/1.9 PY: 1.4/0.9/1.0	*Combined Level 2/3* PY: 3.3*/2.3*/2.7*
Oregon (adolescents)	(0+1+0+0+0+1+0+0+0) =2	*W1-W2* Horse/dog racing – decrease (-1) Casino – expansion (2) (1+2+1)=4	LT: 75*/38* PY: 66*/46*	LT: 5.0/4.6	LT: 1.4/1.3	
South Dakota	(0+1+0+1+1+1+1+0+1) =6	*W1-W2* Casino – expansion (1) Lottery – introduced Horse/dog racing – expansion Slots parlor – introduced (1) (3+3+2)=8	LT: 86*/76* P6mo: NA/65	LT: 1.8/1.4 P6mo: 0.8/0.7	LT: 1.0/0.9 P6mo: 0.6/0.5	
Texas	(0+1+0+1+1+1+0+0+1) =5	*W1-W2* VLT – expansion Casino – expansion (1) (2+3+1)=6	LT: NA/87 PY: 49*/68*	LT: 3.5/3.6 PY: 1.7/2.2	LT: 1.3/1.8 PY: 0.8/0.8	

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Figure 177 (continued)

Study	Methodological Quality (design+waves+control +population+sampling+ N+response+retention +timeframe)	Expansion Events (# of venues) (expansion score – see expansion coding section)	Gambling Participation Rate (W1%/W2%/W3%/ W4%)	Subclinical Gambling Problem Rate (W1%/W2%/W3%/ W4%)	Disordered Gambling Rate (W1%/W2%/W3%/ W4%)	Other Outcome (W1/W2/W3/W4)
Texas (adolescents)	(0+1+0+0+1+0+0+0+0) =2	<u>*W1-W2*</u> Lottery – introduced (1+3+2)=6	PY: NA/49	LT: 11.2/9.9	LT: 5.0/2.3	
Washington	(0+1+0+1+1+1+0+0+1) =5	<u>*W1-W2*</u> Lottery - expansion Casino – expansion EGMs – introduced (3+3+2)=8	LT: 91/89 PY: 80/74	LT: 3.6/3.7 PY: 1.9/1.8	LT: 1.5/1.3 PY: 0.9/0.5	
Washington (adolescents)	(0+1+0+0+1+1+0+0+0) =3	<u>*W1-W2*</u> Lottery - expansion Casino – expansion EGMs - introduced (3+3+2)=8	LT: 83*/78* PY: 69/65	LT: 9.0/7.5	LT: 0.9/0.9	

Where LT=lifetime; PY=past year; P30=past 30 days; P18=past 18 months; P6=past 6 months; W=wave; SE=casino self-excluders; NA=not applicable (not measured). * Rates differ significantly from each other, $p < .05$. ** Rates differ significantly from each other, $p < .01$. ** Rates differ significantly from each other, $p < .001$. ~Difference between rates not tested.

Appendix II: List of Included Peer-Reviewed Gambling-Expansion Articles

Abbott, Max W., Ulla U. Romild, and Rachel A Volberg. "Gambling and Problem Gambling in Sweden: Changes Between 1998 and 2009." *Journal of Gambling Studies.* In press.

Black, Donald W., Brett McCormick, Mary E. Losch, Martha Shaw, Gene Lutz and Jeff Allen. "Prevalence of problem gambling in Iowa: Revisiting Shaffer's adaptation hypothesis." *Annals Of Clinical Psychiatry* 24, no. 4 (2012): 279-284.

Bondolfi, G., F. Jermann, F. Ferrero, D. Zullino, and C.H. Osiek. "Prevalence of pathological gambling in Switzerland after the opening of casinos and the introduction of new preventive legislation." *Acta Psychiatrica Scandinavica* 117, no. 3 (2008): 236-239.

Govoni, Richard, G. Ron Frisch, Nicholas Rupcich and Heather Getty. "First year impacts of casino gambling in a community." *Journal Of Gambling Studies* 14, no. 4 (1998): 347-358.

Grun, Lucia, and Paul McKeigue. "Prevalence of excessive gambling before and after introduction of a national lottery in the United Kingdom: another example of the single distribution theory." *Addiction* 95, no. 6 (2000): 959-966.

Jacques, Christian and Robert Ladouceur. "A prospective study of the impact of opening a casino on gambling behaviours: 2- and 4-year follow-ups." *The Canadian Journal Of Psychiatry / La Revue Canadienne De Psychiatrie* 51, no. 12 (2006): 764-773.

Jason, Donald R., Mark L. Taff and Lauren R. Boglioli. "Casino-related deaths in Atlantic City, New Jersey 1982-1986." *The American Journal of Forensic Medicine and Pathology* 11, no. 2 (1990):112-123.

LaBrie, Richard A., Sarah E. Nelson, Debi A. LaPlante, Allyson J. Peller, Gabriel Caro and Howard J. Shaffer. "Missouri casino self-excluders: Distributions across time and space." *Journal Of Gambling Studies* 23, no. 2 (2007): 231-243.

Ladouceur, Robert, Christian Jacques, Serge Chevalier, Serge Sévigny and Denis Hamel. "Prevalence of pathological gambling in Quebec in 2002." *The Canadian Journal of Psychiatry* 50, no. 8 (2005): 451-456.

Ladouceur, Robert, Christian Jacques, Francine Ferland and Isabelle Giroux. "Prevalence of problem gambling: A replication study 7 years later." *The Canadian Journal Of Psychiatry / La Revue Canadienne De Psychiatrie* 44, no. 8 (1999): 802-804.

Lund, Ingeborg. "Gambling behaviour and the prevalence of gambling problems in adult EGM gamblers when EGMs are banned. A natural experiment." *Journal Of Gambling Studies* 25, no. 2 (2009): 215-225.

Lupu, Viorel and Izabela Ramona Todirita. "Updates of the prevalence of problem gambling in Romanian teenagers." *Journal Of Gambling Studies* 29, no. 1 (2013): 29-36.

Room, Robin, Nigel E. Turner and Anca Ialomiteanu. 1999. "Community effects of the opening of the Niagara casino." *Addiction* 94, no. 10: 1449-1466.

Shepherd, R., Ghodse, H. and London, M. (1998). A pilot study examining gambling behaviour before and after the launch of the National Lottery and scratch cards in the UK, Addiction Research, 6, 5-12.

Slutske, Wendy S. "Natural Recovery and Treatment-Seeking in Pathological Gambling: Results of Two U.S. National Surveys." *The American Journal Of Psychiatry* 163, no. 2 (2006): 297-302.

Toneatto, Tony, Donna Ferguson and Judy Brennan. "Effect of a new casino on problem gambling in treatment-seeking substance abusers." *The Canadian Journal Of Psychiatry / La Revue Canadienne De Psychiatrie* 48, no. 1 (2003): 40-44.

Xian, Hong, Jeffrey F. Scherrer, Wendy S. Slutske, Kamini R. Shah, Rachel Volberg and Seth A. Eisen. "Genetic and environmental contributions to pathological gambling symptoms in a 10-year follow-up." *Twin Research And Human Genetics* 10, no. 1 (2007): 174-179.

Appendix III: List of Included Gray Literature Gambling-Expansion Articles

(We were unable to obtain reports marked with an asterisk but used information from the other listed reports to determine the findings from those reports.)

Arizona

Arizona Criminal Justice Commission. "Arizona Gambling Profile Report." 2006.

Arizona Criminal Justice Commission. "2008 Arizona Youth Survey." Phoenix, AZ: Arizona Criminal Justice Commission, 2008.

Arizona Criminal Justice Commission. "2010 Arizona Youth Survey." Phoenix, AZ: Arizona Criminal Justice Commission, 2010.

Arizona Criminal Justice Commission. "2012 Arizona Youth Survey." Phoenix, AZ: Arizona Criminal Justice Commission, 2012.

Connecticut

Spectrum Gaming Group. "Gambling in Connecticut: Analyzing the Economic and Social Impacts." Linwood, NJ, 2009.

Volberg, Rachel A. "Legal Gambling in Connecticut: Assessment of Current Status and Options for the Future (Volume One)." 1992.

WEFA Group. "A Study Concerning the Effects of Legalized Gambling on the Citizens of the State of Connecticut." Eddystone, PA, 1997.

Delaware

Health Services Policy Research Group. "The Costs and Consequences of Gambling in the State of Delaware." Newark, DE: University of Delaware, School of Urban Affairs and Public Policy, 2002.

Mateja, Walter, Robert Wilson and Betty Ableman. "A Survey of Gambling in Delaware." Newark, DE: University of Delaware, School of Urban Affairs and Public Policy, 1998.

Florida

Lieberman, Louis and Mary Cuadrado. "Gambling among Florida Middle and High School Students." Sarasota, FL: University of South Florida Sarasota-Manatee, 2006.

Shapira, Nathan A., Mary Ann Ferguson, Kimberly Frost-Pineda and Mark S. Gold. "Gambling and Problem Gambling Prevalence among Adolescents in Florida." Gainesville, FL: University of Florida, 2002.

Georgia

Emshoff, Jim, Elizabeth Anthony, Caroline Lippy and Leanne Valentine. "Gambling Report for the Georgia Department of Human Resources." Atlanta, GA: Georgia State University, Department of Psychology, 2007.

* Emshoff, Jim, Eddlemon, K. Broomfield and Mohar. "Treatment of Pathological Gambling: A Review of the Literature." Atlanta, GA: Georgia State University, Department of Psychology, 2000.

Volberg, Rachel A. and Jacqueline Boles. "Gambling and Problem Gambling in Georgia." Roaring Spring, PA: Gemini Research, 1995.

Iowa

Volberg, Rachel A. "Gambling and Problem Gambling in Iowa: A Replication Study." Roaring Spring, PA: Gemini Research, 1995.

Minnesota

Emerson, Michael O., J. Clark Laundergan and James M. Schaefer. "Adult Survey of Minnesota Problem Gambling Behavior; a Needs Assessment: Changes 1990 to 1994." Duluth, MN: Center for Addiction Studies, University of Minnesota, Duluth, 1994.

* Laundergan, J. Clark, James M. Schaefer, K. Eckhoff and P. Pirie. "Adult Survey of Minnesota Gambling Behavior." Duluth MN: Center for Addiction Studies, University of Minnesota, Duluth, 1991.

Louisiana

Esters, Irv, Raymond Biggar, John Lacour and Maria Reyes. "2008 Louisiana Study on Problem Gambling." Lafayette, LA: Cecil J. Picard Center for Child Development, University of Louisiana at Lafayette, 2008.

* Volberg, Rachel A. "Wagering and Problem Wagering in Louisiana. Report to the Louisiana Economic Development and Gaming Commission." Roaring Spring, PA: Gemini Research, 1995.

Vogel, Ronald J. and Phillip Ardoin. "Gambling in Louisiana: 2002 Louisiana Study of Problem Gambling." Baton Rouge, LA: Nelson Mandela School of Public Policy, Southern University, 2002.

Volberg, Rachel A. and W. Lamar Moore. "Gambling and Problem Gambling in Louisiana: A Replication Study, 1995 to 1998." Northampton, MA: Gemini Research, 1999.

Montana

"Montana Gambling in a National and Global Context." 1998.

Volberg, Rachel A. "Gambling Involvement and Problem Gambling in Montana." Albany, NY: Gemini Research, 1992.

North Dakota

Volberg, Rachel A. "Gambling and Problem Gambling in North Dakota: A Replication Study, 1992 to 2000." Northampton, MA: Gemini Research, 2001.

* Volberg, Rachel A. and E. Silver. "Gambling and Problem Gambling in North Dakota." Northampton, MA: Gemini Research, 1993.

New York

Volberg, Rachel A. "Gambling and Problem Gambling in New York: A 10-Year Replication Survey, 1986 to 1996." Roaring Spring, PA: Gemini Research, 1996.

* Volberg, Rachel A. "Compulsive Gambling Treatment Program Evaluation: Final Report." Gemini Research, 1988.

Oregon

Carlson, Matthew J. and Thomas L. Moore. "Adolescent Gambling in Oregon: A Report to the Oregon Gambling Addiction Treatment Foundation." New Brunswick, NJ: Institute of Health, Health Care Policy, and Aging Research, Rutgers University, 1998.

Moore, Thomas L. "The Prevalence of Disordered Gambling among Adults in Oregon: A Replication Study." Portland, OR: Oregon Gambling Addiction Treatment Foundation, 2006.

Volberg, Rachel A. "Changes in Gambling and Problem Gambling in Oregon: Results from a Replication Study, 1997 to 2000." Northampton, MA: Gemini Research, 2001.

Volberg, Rachel A. "Gambling and Problem Gambling in Oregon." Northampton, MA: Gemini Research, 1997.

Volberg, Rachel A., Eric C. Hedberg and Thomas L. Moore. "Oregon Youth and Their Parents: Gambling and Problem Gambling Prevalence and Attitudes." Northampton, MA: Gemini Research, 2008.

South Dakota

* Volberg, Rachel A. and Randall M. Stuefen. "Gambling and Problem Gambling in South Dakota." Gemini Research, 1991.

Volberg, Rachel A. and Randall M. Stuefen. "Gambling and Problem Gambling in South Dakota: A Follow-up Survey." Northampton, MA: Gemini Research, 1993.

Texas

Wallisch, Lynn S. "1992 Texas Survey of Adolescent Gambling Behavior." Austin, TX: Texas Commission on Alcohol and Drug Use, 1993.

* Wallisch, Lynn S. "Gambling in Texas: 1992 Survey of Adult Gambling Behavior." Austin, TX: Texas Commission on Alcohol and Drug Abuse, 1993.

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Washington

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* Volberg, Rachel A. "Gambling and Problem Gambling in Washington State." Northampton, MA: Gemini Research, 1993.

Volberg, Rachel A. and W. Lamar Moore. "Gambling and Problem Gambling among Adolescents in Washington State: A Replication Study, 1993 to 1999." Northampton, MA: Gemini Research, 1999.

Volberg, Rachel A. and W. Lamar Moore. "Gambling and Problem Gambling in Washington State: A Replication Study, 1992 to 1998." Northampton, MA: Gemini Research, 1999.

Appendix IV: Research Interviews

Spectrum Gaming Group staff and associates interviewed the following between July 2, 2013 (i.e., since the Part 1, Section B, report was completed) and August 29, 2013, as part of our research for the Florida Gaming Study. The interviews were conducted in person, by telephone and/or by email, and also include respondents to our online survey of Florida pari-mutuel operators.

Last Name	First name	Affiliation	Title	Date of interview
Adkins	Dan	Mardi Gras Casino	COO	August 8, 2013
Berube	Peter	Tampa Bay Downs	General Manager	July 21, 2013
Biddix	Patrick	Melbourne Greyhound Park	General Manager	July 12, 2013
Biegalski	Leon	Division of Pari-Mutuel Wagering	Director	August 6, 2013
Catina	David	Orlando Jai Alai	General Manager	July 18, 2013
Collins	Jack	Sarasota Kennel Club	General Manager	July 16, 2013
Combest	Phil	Florida Horsemen and Benevolent Protective Association	President	July 18, 2013
Cory	Jack	Florida Greyhound Association	Lobbyist	July 29, 2013
Cotti	Chad	University of Connecticut	Associate Professor of Economics	August 24, 2013
Couch	Michael	Gulfstream Race Course	Gaming Director	July 10, 2013
Fisch	Steve	Florida Quarter Horse Owners' Association	President	July 24, 2013
Fontaine	Gale	Florida Arcade & Bingo Association	President	August 14, 2013
Francati	Daniel	Daytona Beach Kennel Club	General Manager	July 15, 2013
Galluccio	Vito	Moody's Corporation	Analyst	August 12, 2013
Glenn	Michael	Palm Beach Kennel Club	General Manager	July 6, 2013
Hater	Mike	Tampa Greyhound Track	General Manager	July 20, 2013
Havenick	Izzy	Fort Myers-Naples and Flagler greyhound tracks	Vice President	July 15, 2013
Hess	Stockton	Ebro Greyhound Park	General Manager	July 18, 2013
Hlas	Stephen	Derby Lane	Vice President	July 15, 2013
Korman	Howard	Jacksonville Greyhound Racing, Inc.	President	July 30, 2013
Lawson	Ken	Florida Department of Business & Professional Regulation	Secretary	August 6, 2013
Licciardi	Daniel	Miami Jai Alai	General Manager	July 20, 2013
Lupfer	Bill	Florida Attractions Association	CEO	August 14, 2013
Maladecki	Rich	Central Florida Hotel and Lodging Association	Director	August 14, 2013
May	Steve	Association of Racing Commissioners International	Vice President	July 7, 2013
Miller	Austin	Calder Race Course	President	July 20, 2013
Newlin	Mike	Sanford Orlando Kennel Club	General Manager	July 20, 2013
Pando	Damien	Dania Jai Alai	General Manager	July 20, 2013
Pennachio	Joseph	Florida Standardbred Breeders & Owners Association	President	August 2, August 8, 2013
Pickels	Luther	Jefferson County Kennel Club	General Manager	July 13, 2013

Last Name	First name	Affiliation	Title	Date of interview
Pierce	Jennifer	Florida Horsemen's Benevolent and Protective Association	Adviser	Several times July 20-August 15
Pinkston	Brett	PCI Gaming Authority	COO	July 19, 2013
Powell	Lonnie	Florida Thoroughbred Breeders' and Owners' Association	CEO	July 25, 2013
Richards	Robert	Hamilton Jai Alai and Poker	Owner	July 19, 2013
Ritvo	Tim	Gulfstream Race Course	President and General Manager	July 11, 2013
Shelton	Jamie	Jacksonville Greyhound Racing, Inc.	CFO	May 30, 2013
Skrob	Rob	Florida Association of Destination Management	Executive Director	August 16, 2013
Stirling	Kent	Florida Thoroughbred Horsemen's Benevolent and Protective Association	Executive Director	July 25, 2013
Theil	Carey	Grey2 K USA	Executive Director	Several times July 20-August 15
Turner	Richard	Florida Restaurant and Lodging Association	General Council	August 1, 2013
Woodburn	Jeffrey	Deputy Secretary, Florida Dept. of Business and Professional Regulation	Deputy Policy Director	August 6, 2013
Wright	Brandon	City of Davenport	Director of Finance	August 8, 2013
Wyre	Rob	Isle Casino at Pompano	General Manager	July 23, 2013
Yousef	Josellyn	Moody's Corporation	AVP Analyst	August 9, 2013

Appendix V: 2013 Florida Gaming Survey

As noted in Chapter III of Part 1 of this report, The Eric Friedheim Tourism Institute at the University of Florida conducted a study on behalf of Spectrum Gaming Group and the Florida Legislature to explore consumer attitudes, perceptions, and intentions toward the current gambling landscape and potential changes in the state's gambling industry. The quantitative consumer survey provided insights and data for the analysis found in Chapter III.

Spectrum and the University of Florida believe that the survey provides valuable insights into the attitudes, perceptions and intentions toward gambling in Florida that should be considered as the Legislature and other Florida stakeholders consider possible changes to the gambling landscape in the state.

The survey is presented in its entirety on the following pages.

Florida Gaming Study: Consumer Attitudes, Preferences & Intentions

October 1, 2013

Dr. Lori Pennington-Gray
Dr. Greg Dunn

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PURPOSE AND METHODOLOGY

Purpose and Methodology

The Eric Friedheim Tourism Institute at the University of Florida conducted a study on behalf of Spectrum Gaming and the Florida Legislature to explore consumer attitudes, perceptions, and intentions toward the possible expansion of gambling in the State of Florida and to gauge the potential impact that expanded gambling could have on the state and its tourism industry. The insights gleaned from this research are intended to enlighten the discussion on the gambling initiative and the related economic impact study.

Respondent Screeners

- Respondents were pre-qualified and screened for inclusion in the study based on the following criteria:
    - Age: 18 years and older;
    - Adults residing in Florida (n=1223);
    - Adults residing in Non-Florida States (n=1213).

Sampling

- The sample was comprised as follows:
    - One (1) quantitative consumer survey conducted online with a total sample of two-thousand four hundred and thirty-six pre-qualified respondents (n=2436) comprised of:
        - One (1) Florida representative probability sample of one thousand two hundred and twenty three (n=1223) Florida residents:
            - The Florida sample included those residing in three regions: 181 residents in North Florida, 553 residents in Central Florida, and 483 in South Florida.
        - One (1) nationally representative probability sample of one-thousand two hundred and thirteen (n=1213) U.S. Residents (Residing in non-Florida States):
            - The U.S. sample included those residing in four regions: 298 residents in the West, 351 residents in the Midwest, 277 residents in the Northeast and 289 residents in the South.

Data Collection

- The data for this study were collected during the month of August, 2013. A 20-minute consumer survey was conducted online with a total sample of twenty-four hundred thirty six (n=2436) pre-qualified respondents.

Research Objectives

- In this study respondents were asked to provide their opinion on the following:
    - Preferences for gambling in general and, specifically, proposed changes to the gambling industry in the State of Florida;
    - The likelihood and type of participation in gambling activities in Florida;
    - Preferred gambling regulations;
    - Travel intentions toward the State of Florida and specific Florida destinations given the presence or absence of expanded gambling venues;
    - Gambling addiction characteristics of the sample;
    - Demography;

Confidence Level

The margin of error for the statistical estimates that appear in this report is ±2.5% at the 95% level of confidence.

Figure 1: Sample Size by U.S. Census Regions

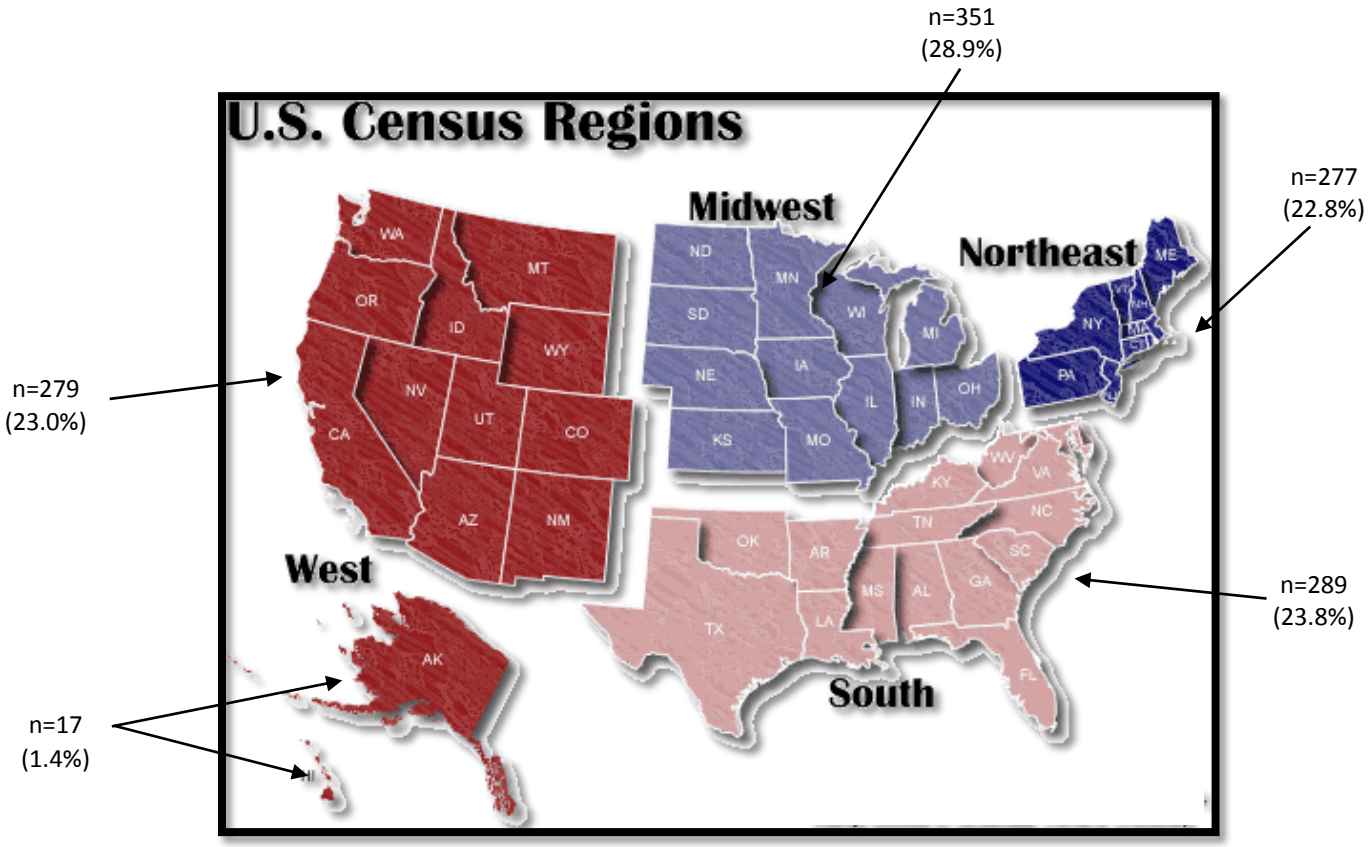
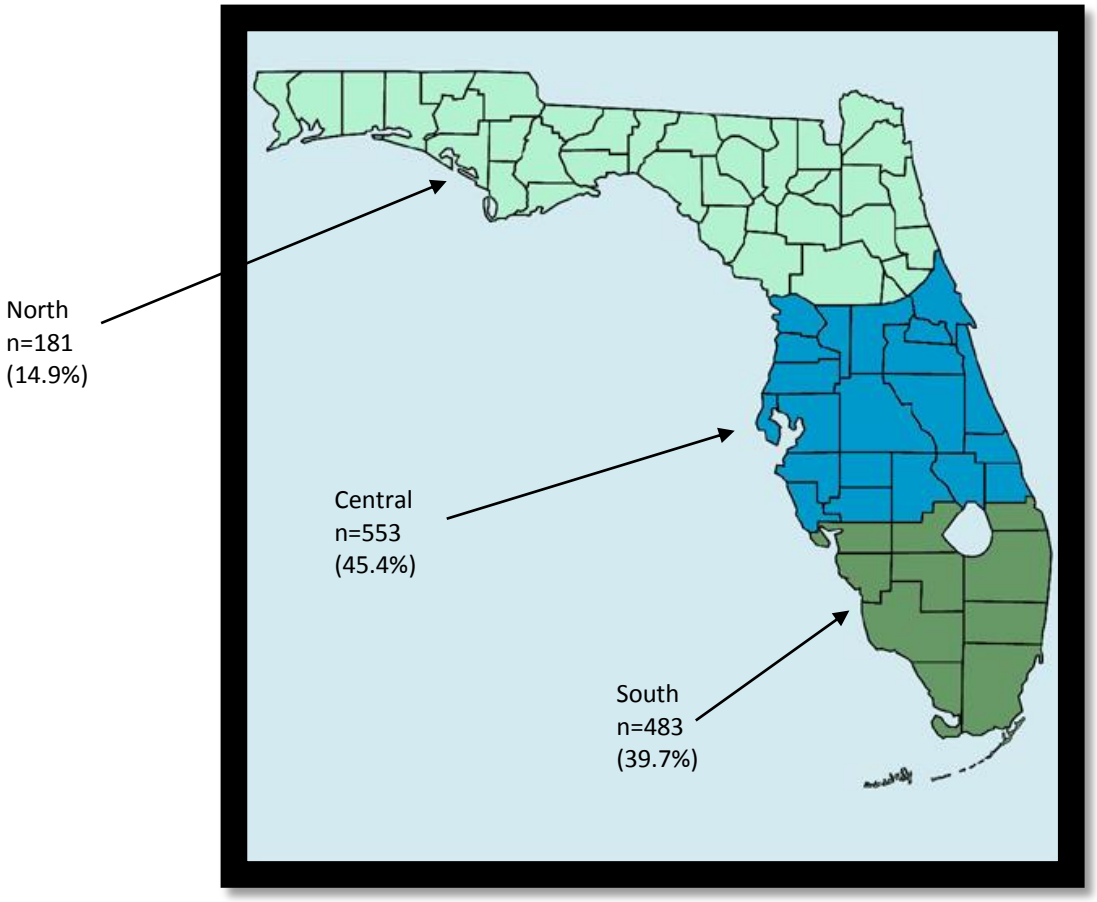


Figure 2: Sample Size by Florida Regions (North, Central, South)



EXECUTIVE SUMMARY

Executive Summary

Eric Friedheim Tourism Institute conducted this study on gaming preferences to gauge the sentiments, perceptions, and intentions toward current and potential changes in gaming opportunities in the State of Florida and its impact on the tourism industry. In this nationally representative study, respondents were asked to provide their opinions on preferences toward gambling in general and, specifically, expanded gambling in the State of Florida. They also reflected on their perceptions of Florida given the presence or absence of gambling venues, as well as their likelihood of traveling to and participating in expanded activities in Florida.

The study was fielded during the month of August, 2013, and data were collected from 2,436 respondents. Results compare Florida residents with Non-Florida residents, and each of the three designated regions of Florida (North, Central, and South) with each other.

Key Findings

Visitation to Florida

- Nearly four-in-ten (41%) non-Florida residents have visited Florida during the past two years, while roughly six-in-ten (59%) have not visited Florida during the past two years.
- The majority (51%) of non-Florida residents were extremely/somewhat interested in visiting Florida during the next year. Florida is most viewed as a destination that is popular, fun, beautiful, diverse, and interesting. Florida is least viewed as liberal, innovative or open-minded.

Gambling Behavior

- More than eight in ten (84%) of the respondents interviewed have gambled in their lifetime.
    - The majority of both Florida residents (86%) and non-Florida residents (82%) have gambled in their lifetime.
    - Slightly less than half of Florida residents (48%) and non-Florida residents (49%) have gambled during the past 12 months
- Nearly half of respondents (48%) interviewed have gambled at least once during the past 12 months.
    - Of those who gambled during the past year, roughly half of Florida residents (50%) and nearly six in ten non-Florida residents (59%) gambled only a few days during the year.
- Respondents spent an average of $532 a year on gambling.
- Of those who have gambled during the past 12 months, the largest proportion of respondents interviewed play the lottery (88%), followed by gambling in a casino (77%).
    - Among those who gamble, more than nine in ten (92%) of Florida residents and eight in ten (84%) of non-Florida residents play the lottery. The next most popular type of gambling is gambling in a casino with three quarters (76%) of Floridians and eight in ten (81%) non-Florida residents participating.
    - Slot machines are the most popular game for both Florida residents (77%) and non-Florida residents (78%) who have gambled during the past year. Roughly four in ten (41%) of respondents played card games such as blackjack or poker, while one in five (22%) played other table games such as roulette or craps.
- Both Florida residents and non-Florida residents engage in gambling for the chance of winning money or prizes (35% and 33% respectively).
- Two thirds of Florida residents (67%) and non-Florida residents (65%) state the largest contributing factor for not participating in gambling is that they have other things that they would rather spend their money on. These numbers were also consistent among those residing in the three Florida geographic regions (north, central and south Florida).

Attitudes toward Gambling

- More than four in ten respondents are neutral toward gambling in general (neither support nor oppose). One in three (32%) supports gambling and roughly one in ten (11%) supports gambling but does not participate or opposes gambling (8%) in general.
    - South Florida residents were more likely to oppose gambling (8%) than their Central Florida counterparts (7%).
- Half of respondents interviewed (53%) cite moral grounds as the main reason for note participating in gambling, while slightly fewer (46%) cite religious reasons. Roughly one-third cites concerns about lost productivity (36%) or crime (35%) as reasons for not participating in gambling.
    - South Florida residents are significantly more likely than their North Florida counterparts to cite concerns of crime for reasons not to gamble (40% vs. 25%).

Casino Gambling in Florida

- Nearly four in ten (37%) of respondents who indicated they have gambled, have gambled in Florida at least once during their lifetime.
    - More than half (55%) of respondents who indicated they have gambled in Florida, have gambled in Florida during the past 12 months (other than the lottery).
- More than half of respondents interviewed indicated they are not at all likely/ unlikely to gamble in Florida in the future, while one-quarter (26%) indicate they are extremely likely/ likely to gamble in Florida in the future.
    - Non-Florida residents were significantly more likely to state that they would gamble in Florida in the future (46%) than Florida residents (23%).
    - Roughly, seven in ten (68%) of respondents who are extremely likely/likely to gamble in Florida in the future are likely to play the lottery, while approximately two-thirds (68%) are likely to gamble at an Indian Casino. One in five is likely to gamble at a pari-mutuel facility – horse racetrack (21%) or dog racetrack (18%).
    - For respondents who indicated they have gambled in Florida during the past year, they gambled approximately $475.02 on gambling in Florida during that period.

Sentiments toward Gambling in Florida

- More than four in ten (42%) of respondents interviewed are neutral toward expanding gambling opportunities in Florida, while (40%) supports/supports but will not participate expanded gambling in the State. Approximately, one in ten (11%) opposes the expansion of gambling in the State.
    - Nearly half of the non-Florida residents (48%) and four in ten Florida residents are neutral towards expanding gambling in the state of Florida.
- Depending on the type of gambling, between four in ten and six in ten respondents have no opinion towards the expansion, restriction or reduction of gambling in Florida.
    - Roughly four in ten Florida residents would like to see expanded casino gambling at commercial resorts (41%) casino gambling at tribal facilities (33%) and the lottery (37%) as compared to approximately one in ten who would like to see it restricted or reduced.
- The majority of Florida residents (67%) and non-Florida residents (78%) are less likely to be in favor of expanding gambling in Florida if additional restrictions or limits were placed on gambling in the State.
    - A larger portion of South Florida residents (82%) than those in Central Florida (62%) and North Florida (52%) would be less likely to be in favor of expanded gambling in Florida if additional restrictions were put on gambling in the State.

Impact of Expanded Gambling on Florida's Tourism Industry

- One-third of respondents believe that the gambling industry is an extremely important/very important contributor to the overall travel and tourism industry.

- More than three-quarters of non-Florida residents (78%) are not likely to change their visitation intentions to Florida if gambling opportunities were expanded.
    - More than eight in ten (83%) non-Florida residents would visit Florida the same amount if gambling opportunities were reduced.
    - Roughly half (54%) of non-visitors to Florida who have not visited Florida during the past 24 months indicated they would not come to Florida if gambling opportunities were expanded.
- Approximately 15% of visitors said they would stay longer if gambling opportunities were expanded. The average extension was two days.
- One in five Florida residents would spend more on travel if gambling opportunities were reduced in Florida.
- Roughly one in six Florida residents in each region believe that reducing gambling in Florida would have a more favorable outcome for the state of Florida (range 13% to 16%)
    - Florida residents are significantly more likely to believe that gambling offers the benefits of creating more jobs in the state or community (69% vs. 53%).
    - Across the three regions, a larger portion of residents believe that gambling offers Florida the most benefits in terms of creating more jobs in the state or community.

Preferred Gambling Regulations

- Nearly six in ten respondents believe that the State should regulate gambling at Internet sweepstakes cafes, arcades and truck stops.
    - More than two-thirds of Florida residents across all regions believe the State should tax gambling at internet sweepstakes cafes, arcades and truck stops.
    - Respondents residing in Central and South Florida are significantly more likely than their North Florida counterparts to believe the State should regulate gambling in internet sweepstakes, arcades and truck stops.
- Approximately one in three respondents believes that the State should prohibit gambling at Internet sweepstakes cafes, arcades and truck stops.
- More than six in ten of respondents interviewed believe the State should tax gambling at Internet sweepstakes cafes, arcades and truck stops.
- Slightly less than one in five (19%) respondents is in favor of reducing the number of slot machines at Pari-mutuel facilities in Florida.
    - Non-Florida residents are (54%) significantly more likely than Florida residents (36%) to be unsure of whether they are in favor of the State of Florida authorizing Pari-mutuel facilities in Florida to conduct table games
- One-third of respondents interviewed (34%) is in favor of the State authorizing Pari-mutuel facilities in Florida to conduct table games.
    - Central Florida (43%) and South Florida (43%) residents are significantly more likely to be in favor of the state of Florida authorizing pari-mutuel facilities in Florida to conduct table games.
- Approximately one-third of Florida residents and one-quarter of non-Florida residents believe that there should be no change to each type of Pari-mutuel facility in Florida (e.g., thoroughbred horse racing, harness racing, quarter horse racing, and greyhound racing).

Impact of Expanded Destination Casino Gambling in Florida

- Nearly half of respondents interviewed (48%) believe that Florida should authorize new destination casino resorts. Roughly one-third does not know/is not sure.
    - More than four in ten (44%) believe that the State should authorize between 2-3 new destination casino resorts.

- More than half of respondents interviewed (56%) believe that expanded gambling would be beneficial to Florida, while one in three (32%) are in favor of bringing a large-scale destination casino resort to their town.
    - More than four-in-ten Florida residents (46%) and six in ten (63%) non-Florida residents believe that expanded gambling would be beneficial to Florida, while one in three (31%) are in favor of bringing large-scale destination casino resorts to their town.
    - One-in-five Florida residents is either not in favor of bringing large-scale destination casino resorts to their town or is in favor of bringing large-scale destination casino resorts to Florida, but don't want one in their city or town.

CORE QUESTIONS

Florida Resident Sample

The majority of the Florida resident sample lives in Central Florida (45%), followed by South Florida (40%) and North Florida (15%).

Table 1:
Do you live in North, Central or South Florida?

	Florida Residents % (n=1223)
North	14.9
Central	45.4
South	39.7

Of all Florida respondents (n=1223)

Non-Florida Resident Sample

The non-Florida resident sample is comprised of approximately one-quarter each from the West (23%), Midwest (29%), Northeast (23%), and Southern (24%) regions of the U.S., as defined by the U.S. Census.

Table 2:
What is your zip code?

	Non-Florida Residents % (n=1213)
West	23.0
Midwest	28.9
Northeast	22.8
South	23.8
Hawaii & Alaska	1.4

Of all Non-Florida respondents (n=1213)

Visitation to Florida

Nearly four-in-ten (41%) non-Florida residents have visited Florida during the past two years, while roughly six-in-ten (59%) have not visited Florida during the past two years.

Table 3:
Have you visited Florida during the past two years?

	Non-Florida Residents (n=1213)
Yes	40.8
No	58.8
Don't know	3.0
Refuse	1.0

Of all non-Florida respondents (n=1213)

Likelihood of Visiting Florida

The majority (51%) of non-Florida residents were extremely/somewhat interested in visiting Florida during the next year.

Table 4:
How interested are you in visiting Florida during the next year?

	Non-Florida Residents (n=1213)
Not at all interested	15.6
Somewhat not interested	10.0
Neutral	23.3
Somewhat interested	22.2
Extremely interested	28.9

Of all non-Florida respondents (n=1213)

Living Distance from a Gambling Facility

The distance that respondents live from a gambling facility is similar between Florida residents and non-Florida residents. More than one-third of the Florida residents (36%) and three-in-ten non-Florida residents (31%) live about 1 hour away from a gambling facility. Slightly more non-residents live more than 2 hours away from a gambling facility (23% vs. 12%, respectively).

Table 5:
How far do you live from a gambling facility?

	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
10 minutes or less	9.8	7.8
10 minutes to ½ hour	28.5	24.2
About 1 hour	36.4	30.8
2 hours	13.7	14.2
More than 2 hours away	11.6	23.0

Of all respondents (n=2436)

Image of Florida as a Destination

Florida is viewed in a positive light by residents and non-residents. Of the nineteen attributes, Florida respondents significantly regard Florida with more positive attitudes than non-Florida residents on 13 attributes. Florida residents perceive several of Florida's images more positively than their counterparts on such images as "popularity" (82% vs. 76%), "fun" (80% vs. 74%), "beautiful scenery" (77% vs. 69%), "diverse" (69% vs. 58%), "interesting" (67% vs. 60%), "clean" (52% vs. 39%), "health and wellness focused" (46% vs. 34%), "affordable" (44% vs. 29%), "slow paced life"(43% vs. 36%), "independent" (36% vs. 28%), "conservative" (36% vs. 31%), "open-minded" (31% vs. 27%), and "innovative" (30% vs. 26%).

Non-Florida residents are significantly more likely than Florida residents to think of Florida as being "crowded" (54% vs. 49%).

Table 6:
How well do each of the following attributes describe Florida?*

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
1. Popular	79.3	82.3[a]	76.4
2. Fun	76.7	79.5[a]	73.8
3. Beautiful scenery	72.6	76.7[a]	68.7
4. Diverse	63.4	68.8[a]	58.1
5. Interesting	63.4	66.9[a]	60.0
6. Family-oriented	55.0	54.0	56.0
7. Friendly	50.9	52.2	49.7
8. Clean	45.4	51.6[a]	39.0
9. Crowded	51.6	49.1	54.2[a]
10. Health and wellness-focused	39.7	46.0[a]	33.5
11. Affordable	36.8	44.2[a]	29.4
12. Slow-paced lifestyle	39.4	42.5[a]	36.3
13. Hip, cool, contemporary	38.6	40.1	37.2
14. Safe	37.0	38.0	36.1
15. Independent	31.7	35.9[a]	27.5
16. Conservative	33.5	35.6[a]	31.3
17. Open-minded	28.8	30.7[a]	26.9
18. Innovative	28.0	29.8[a]	26.3
19. Liberal	19.9	19.5	20.1

Of all respondents (n=2436)

**Top-two box score based on a 5-pt scale where 1 equals "does not describe at all" and 5 equals "describes extremely well".*
a – Denotes a significant difference between Florida residents and non-Florida residents

GAMBLING PARTICIPATION AND PREFERENCES

Past Gambling Behavior - Lifetime

More than eight in ten respondents interviewed have gambled during their lifetime.

Overall, for Florida residents and non-Florida residents alike, the majority are more likely to have gambled than not. More than eight-in-ten Florida residents and non-Florida residents have gambled at least once during their lifetime (86% vs. 82%, respectively).

Table 7:
Have you ever gambled in your lifetime?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Yes	84.1	85.8	82.4
No	14.9	13.0	16.9

Of all respondents (n=2436)
**Does not equal 100% due to non-response and don't know*

Past Gambling Behavior – Florida Residents by Region Lifetime

A closer look reveals consistent gambling behavior within the regions of the State of Florida. More than eight-in-ten residents of North (83%), Central (87%), and South (86%) Florida residents have gambled in their lifetime.

Table 8:
Have you ever gambled in your lifetime?
Florida Residents by Region

	North Florida Residents % (n=181)	Central Florida Residents % (n=553)	South Florida Residents % (n=489)
Yes	83.4	86.8	85.5
No	14.9	12.1	13.3

Of all Florida respondents (n=1223)

Past Gambling Behavior – Past Year

Half of respondents surveyed have gambled during the past 12 months.

Slightly less than half of Florida residents (48%) and non-Florida residents (49%) have gambled during the past year.

Table 9:
Have you gambled during the past 12 months?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Yes	48.4	48.2	48.6
No	50.2	50.4	50.1

Of all respondents (n=2436)

**Does not equal 100% due to non-response and don't know*

Past Gambling Behavior – Florida Residents by Region Past Year

The breakdown of gambling during the past 12 months by region of Florida reveals no statistical differences between those who live in the three different regions. Slightly more South (50%) and Central Florida residents (49%) have gambled during the past year than their North Florida counterparts (43%).

Table 10:
Have you gambled during the past 12 months?
(n=590)

	North Florida Residents % (n=78)	Central Florida Residents % (n=268)	South Florida Residents % (n=239)
Yes	43.1	48.5	49.5
No	54.1	50.1	49.5

Of all Florida respondents who responded to the question (n=585)

**sample size accounts for non-respondents*

Frequency of Past Year Gambling

The majority of the respondents interviewed (55%) gamble a few days all year.

Of those who gambled during the past 12 months, roughly half of Florida residents (50%) and nearly six-in-ten non-Florida residents (59%) gambled only a few days during the year, while one-quarter of residents (24%) and one-in-five non-Florida residents gambled once a month or less. Roughly one-in-seven Florida residents (16%) and non-residents (15%) gambled several times per month. A very small percentage of Florida and non-Florida residents gambled daily (2% vs. 1%, respectively).

Table 11:
How often have you gambled during the past 12 months?

	Total Sample % (n=1180)	**Florida Residents % (n=590)**	**Non-Florida Residents % (n=590)**
Only a few days all year (1-5 times per year)	54.4	50.1	58.7
Once a month or less (6-12 times per year)	21.9	24.3	19.5
Several times a month (3-5 times per month)	15.6	16.1	15.1
Several times a week (6-29 times per month)	5.8	6.8	4.9
Daily (30+ times per month)	1.4	1.7	1.0
Not at all in the past 12 months (0 times)	0.3	0.5	0.2
Don't know	0.5	0.5	0.5
Refused	0.1	0.0	0.2

**Of those who gambled during the past 12 months (n=1180)*

Spending on Gambling

Florida and non-Florida residents spent an average of $530 per year on gambling ($530 vs. $536, respectively).

Table 12:
How much do you spend on gambling on average during a year?

	Total Sample % (n=1180)*	Florida Residents % (n=590)	Non-Florida Residents % (n=590)
Average dollar amount	$531.90	$530.10	$536.29

**Of those who gambled during the past 12 months (n=1180)*

Types of Gambling Participated In

Of those who gambled, playing the lottery was the most common type of gambling participated in (88%), followed by gambling in a casino (77%). The least common form of gambling was betting on jai alai (8%).

Among those who gamble during the past 12 months, roughly nine-in-ten Florida residents (92%) and eight-in-ten non-Florida residents (84%) play the lottery. Not far behind is participation in casino gambling with three-quarters of Florida residents and eight-in-ten non-Florida residents reporting participation in casino gambling. Roughly one-quarter of all respondents play gaming machines outside a casino, while slightly more non-Florida residents (24%) bet on horse racing than Florida residents (21%).

Non-Florida residents are significantly more likely than Florida residents to gamble in a casino (80% vs. 76%), participate in some form of sports betting (35% vs. 28%) or other gambling activities (25% vs. 20%). Florida residents, on the other hand, are significantly more likely than non-Florida residents to bet on dog racing (13% vs. 6%).

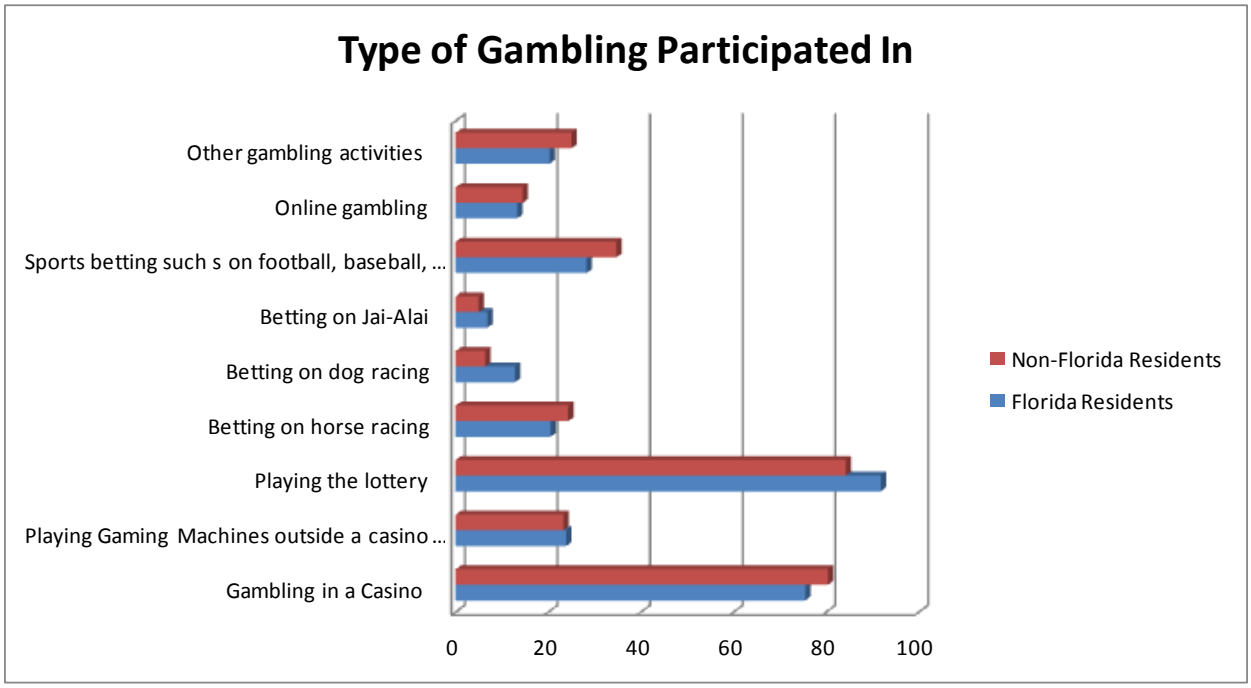
Table 13:
In which types of gambling do you participate?*

	Total Sample % (n=1180)*	Florida Residents % (n=590)	Non-Florida Residents % (n=590)
Playing the lottery	87.8	91.8	84.2
Gambling in a Casino	77.3	75.5	80.4[a]
Sports betting such as on football, baseball, hockey, soccer, etc. (whether legal or not)	30.7	28.3	34.7[a]
Playing Gaming Machines outside a casino such as horse track, dog track, jai-alai, internet sweepstakes café, etc.	23.0	23.9	23.3
Betting on horse racing	21.6	20.5	24.3
Other gambling activities	20.8	20.3	25.0[a]
Online gambling	13.5	13.3	14.5
Betting on dog racing	9.3	12.8[a]	6.4
Betting on Jai-Alai	5.7	6.9	5.0

**Of those who gambled during the past 12 months (n=1180)*

a – Denotes a significant difference between Florida residents and non-Florida residents

Figure 3: Type of Gambling Participated in by Place of Residence



**Among those who gamble. Does not equal 100%. Multiple responses allowed.*

Preferred Games

Slot machines are the most played type of casino gambling (77%) among respondents who have gambled during the past 12 months.

More than three-quarters of Florida and non-Florida residents play slot machines, roughly four-in-ten play card games, and one-in-five play table games or video games such as video poker.

Non- Florida residents are more likely to play Keno type games (9%) than Florida residents (5%).

Table 14:
What games do you usually play?

	Total Sample % (n=1180)*	Florida Residents % (n=590)	Non-Florida Residents % (n=590)
Slot machines	77.4	77.1	77.7
Card games such as blackjack or poker	40.7	42.1	39.3
Other table games, such as roulette or craps	21.7	22.2	21.2
Other video games, such as video poker	18.6	17.0	20.1
Bingo	9.9	8.5	11.3
Sports betting	9.4	8.1	10.7
Keno-type games	7.1	5.3	9.0[a]
Horse or dog race betting	4.9	5.1	4.7
Pull tabs	4.7	4.8	4.8
Don't know	2.0	2.5	1.5
Refused	1.4	1.9	1.0
Other (specify)	1.8	1.7	1.9

**Of those who gambled during the past 12 months (n=1180)*
a – Denotes a significant difference with Florida residents and Non-Residents

Reasons to Engage in Gambling

Respondents gamble for a variety of reasons. Regardless of where they live, approximately one-third of Florida residents (35%) and non-Florida residents (33%) cite the chance of winning money or prizes as reasons why they gamble. One-in-five cite the element of excitement, and roughly one-in-seven state that they gamble to make money or because it's something they do with friends or family.

Roughly one-in-ten like to gamble because of the sense of achievement when they win or because gambling is a hobby or pastime. Interestingly, neither group gambles to impress people (1% and 2%, respectively).

Table 15:
Why do you gamble?

	Total Sample % (n=1180)*	Florida Residents % (n=590)	Non-Florida Residents % (n=590)
For the chance of winning money or prizes	34.1	34.8	33.3
Because it's exciting	18.8	19.5	18.1
To make money	16.4	16.1	16.8
Because it's something that I do with my friends or family	15.1	15.4	14.7
As a hobby or a pastime	9.2	9.5	9.0
Because of the sense of achievement when I win	9.9	9.2	10.7
To relax	7.5	8.3	6.8
For the mental challenge or to learn about the game or activity	6.9	6.6	7.3
To escape boredom or to fill my time	5.6	5.6	5.6
To be sociable	5.3	4.4	6.3
Because I'm worried about not winning if I don't play	2.3	2.0	2.5
To compete with others (e.g. bookmaker, other gamblers)	2.9	2.0	3.7
Because it helps when I'm feeling tense	2.2	1.7	2.7
To impress other people	1.4	1.4	1.5

Of those who gambled during the past 12 months (n=1180)
** Multiple responses allowed.*

Reasons to Engage in Gambling - Florida Residents by Region

Regardless of where they live, over one-third of residents from North (36%), Central (37%), and South Florida (33%) cite the chance of winning money or prizes as reasons why they gamble, followed by the element of excitement (22% vs. 19$ vs. 19%). Among the remainder of reasons to gamble, there are differences between the regions.

Table 16:
Why do you gamble?*
Florida Residents by Region

	North Florida Residents % (n=78)	Central Florida Residents % (n=268)	South Florida Residents % (n=239)
For the chance of winning money or prizes	35.9	36.9	32.6
Because it's exciting	21.8	19.0	19.2
Because it's something that I do with my friends or family	17.9	18.3	11.7
To make money	16.7	16.8	15.5
To relax	10.3	10.4	5.4
As a hobby or a pastime	9.0	9.0	10.0
Because of the sense of achievement when I win	9.0	10.8	7.5
For the mental challenge or to learn about the game or activity	9.0	9.0	2.9
To escape boredom or to fill my time	9.0	6.0	3.8
Because I'm worried about not winning if I don't play	5.1	2.6	0.4
To be sociable	3.8	4.9	4.2
To compete with others (e.g. bookmaker, other gamblers)	3.8	3.0	0.4
Because it helps when I'm feeling tense	3.8	1.9	0.8
To impress other people	2.6	1.1	1.3

Of Florida residents who responded to the question (n=585)
** Multiple responses allowed.*

Reasons for Not Participating in Gambling

Two-thirds of Florida residents (67%) and non-Florida residents (65%) state the largest contributing factor for not participating in gambling is that they have other things that they would rather spend their money on. In addition, Non-Florida residents are significantly more likely to state that they are not interested (44% vs. 38%) or live too far away (14% vs. 10%) from gambling to participate.

Table 17:
Why do you not participate in gambling?*

	Total Sample % (n=1224)*	Florida Residents % (n=616)	Non-Florida Residents % (n=608)
Have other things that I would rather spend my money on	65.9	66.9	64.9
Not interested	40.8	38.0	43.7[a]
Have other things that I would rather spend my time on	36.2	35.1	37.4
Live too far away	12.2	10.4	14.0[a]
Religious reasons	8.8	8.3	9.4
Moral grounds	8.7	7.8	9.7
Inconvenient	7.6	7.5	7.7

**Of those who have not gambled during the past 12 months (n=1224)*

Reasons for Not Participating in Gambling – Florida Residents by Region

A slightly higher proportion of South Florida residents (70%) than Central (65%) or North Florida residents (64%) cite that they do not participate in gambling because they have other things that they would rather spend their money on, while more North Florida residents (45%) state that they are just not interested than residents in Central (35%) and South Florida (29%) residents.

Table 18:
Why do you not participate in gambling?*
Florida Residents by Region

	North Florida Residents % (n=92)	Central Florida Residents % (n=278)	South Florida Residents % (n=243)
Have other things that I would rather spend my money on	64.3	65.0	69.9
Not interested	44.9	35.0	28.5
Have other things that I would rather spend my time on	37.8	31.4	38.1
Live too far away	10.2	10.8	10.0
Religious reasons	8.2	7.2	9.6
Moral grounds	8.2	7.2	8.4
Inconvenient	6.1	8.7	6.3

Of all Florida residents who have not gambled during the past 12 months (n=616)

SENTIMENTS REGARDING GAMBLING

Attitudes towards Gambling

More than four-in-five Florida (47%) and non-Florida (47%) residents are neutral toward gambling in general, while approximately one-third supports gambling (32% vs. 31%, respectively). Florida residents are significantly more likely than non-Florida residents to support gambling but not participate (11% vs. 10%), while non-Florida residents (8%) are significantly more likely to oppose gambling than Florida residents (8%).

d
Table 19:
How do you feel about gambling in general?

	Total Sample % (n=2439)	Florida Residents % (n=1224)	Non-Florida Residents % (n=1213)
Neutral- neither support or oppose	46.9	46.5	47.4
I support gambling	31.6	32.1	31.0
I support gambling but do not participate	10.5	11.2[a]	9.9
I oppose gambling	8.0	7.7	8.3[a]
No opinion	3.0	2.5	3.5

Of all respondents (n=2439)
a – Denotes significant difference from Florida residents

Attitudes towards Gambling – Florida Residents by Region

Significant differences in attitudes towards gambling were found among Florida residents from different regions. South Florida residents (8%) were more likely than their Central Florida counterparts (7%) to oppose gambling.

Table 20:
How do you feel about gambling in general?
Florida Residents by Region

	North Florida Residents % (n=181)	Central Florida Residents % (n=553)	South Florida Residents % (n=490)
Neutral- neither support or oppose	53.0[b]	45.0	45.8
I support gambling	27.6[c]	32.4	33.7
I support gambling but do not participate	11.0	12.3	10.1
I oppose gambling	6.6	7.2	8.3[a]
No opinion	1.7	3.1[d]	2.1

Of all Florida residents (n=1224)

a- Denotes a significant difference from residents from South Florida and Central Florida

b – Denotes a significant difference from residents of North Florida and the other two regions
c – Denotes a significant difference from residents of North Florida and the other two regions

d-Denotes a significant difference from residents of Central Florida and North Florida

Reasons for Not Participating in Gambling

More than half of respondents who indicated that they have not gambled during the past 12 months, state they do not participate in gambling due to moral grounds, while slightly fewer (48%, 45%) cite religious reasons.. Florida residents are significantly more likely than non-Florida residents to cite concerns over crime (40% vs. 32%) and lost productivity (38% vs. 34%) as reasons for not gambling. Non-Florida residents are significantly more likely than their Florida counterparts to cite personal reasons for not gambling (36% vs. 20%).

Table 21:
Why don't you participate in gambling?

	Total Sample % (n=1224)*	Florida Residents % (n=616)	Non-Florida Residents % (n=608)
Moral grounds	52.8	51.1	54.5
Religious reasons	46.2	47.9	44.6
Crime	35.4	39.4[a]	31.7
Lost productivity	35.9	38.3[a]	33.7
Problem gambling	30.8	27.7	33.7
Personal reasons	28.2	20.2	35.6[a]
Am not at all opposed to having casinos	2.1	1.1	3.0

**Of those who have not gambled during the past 12 months (n=1224)*

**Does not equal 100%. Multiple responses allowed*
a – Denotes significant difference between Florida residents and non-Florida residents

Reasons for Not Participating in Gambling - Florida Residents by Region

Nearly six-in-ten South Florida residents (58%) do not participate in gambling for moral reasons and a similar proportion of North Florida residents (58%) cite religious reasons for not gambling. Roughly half of South Florida residents cite concerns related to crime and lost productivity as reasons not to gamble. South Florida residents are significantly more likely than their North Florida counterparts to cite concerns related to problem gambling as reasons not to gamble (40% vs. 25%).

Table 22:
Why don't you participate in gambling?
Florida Residents by Region

	North Florida Residents % (n=92)	Central Florida Residents % (n=278)	South Florida Residents % (n=243)
Moral grounds	50.0	47.5	57.5
Religious reasons	58.3	52.5	42.5
Crime	25.0	30.0	50.0
Lost productivity	25.0	32.5	47.5
Problem gambling	25.0	15.0	40.0[b]
Personal reasons	8.3	27.5	17.5
Am not at all opposed to having casinos	8.3	0.0	0.0

Of Florida residents who have not gambled during the past 12 months (n=616)

**Does not equal 100%. Multiple responses allowed*
a - Denotes significant difference between North and Central Florida residents
b- Denotes significant differences between North and South Florida residents
c- Denotes significant differences between Central and South Florida residents

CASINO GAMBLING IN FLORIDA

Gambling in Florida

Approximately, four in ten (37%) of respondents who indicated they have gambled, have gambled in Florida at least once in their lifetime.

Florida residents are significantly more likely than non-Florida residents to have gambled in the State of Florida during their lifetime (60% vs. 13%).

Table 23:
Have you ever gambled in Florida (other than the lottery)?

	Total Sample % (n=2048)*	Florida Residents % (n=1049)	Non-Florida Residents % (n=999)
Yes	37.1	60.4[a]	12.6
No	62.3	38.9	86.7[a]

**Of those who have gambled (n=2048)*
a – Denotes significant difference from Florida residents and non-residents

Gambling in Florida – Florida Residents by Region

More than six-in-ten South (63%) and Central (61%) Florida residents have gambled in Florida, while slightly more than half of North (52%) Florida residents have.

Table 24:
Have you ever gambled in Florida (other than the lottery)?
Florida Residents by Region

	North Florida Residents % (n=151)	Central Florida Residents % (n=480)	South Florida Residents % (n=418)
Yes	52.3	61.3	62.5
No	47.7	37.9	36.8

Of Florida residents who have gambled (n=1049)

Past Year Gambling in Florida

More than half (55%) of respondents who indicated they have gambled in Florida, have gambled in Florida during the past 12 months (other than the lottery).

Florida residents are significantly more likely than their non-Florida counterparts to have gambled in Florida (other than the lottery) during the past 12 months (58% vs. 40%).

Table 25:
Have you gambled in Florida during the past 12 months (other than Lottery)?

	Total Sample % (n=892)*	Florida Residents % (n=739)	Non-Florida Residents % (n=153)
Yes	55.1	58.2[a]	39.7
No	44.2	41.2	59.5[a]

Of those who have gambled in Florida (n=892)
a – Denotes significant difference from Florida residents and non-Florida residents

Past Year Gambling in Florida – Florida Residents by Region

South Florida residents are significantly more likely to have gambled (other than the lottery) in Florida during the past 12 months than **North** Florida residents (59% vs. **54%** respectively).

Table 26:
Have you gambled in Florida in the past 12 months (other than lottery)?
Florida Residents by Region

	North Florida Residents % (n=187)	Central Florida Residents % (n=294)	South Florida Residents % (n=258)
Yes	54.4	58.2	59.3[a]
No	41.8	41.5	40.7[b]

Of Florida residents who gambled in Florida (n=739)
a – Denotes a significant difference from residents of South Florida and North Florida
b- Denotes a significant difference from residents of South Florida and the other two regions

Gambler Experience with Florida Gambling Venues

More than one third of the respondents interviewed who have gambled in Florida, have gambled at the Seminole Hard Rock Hotel & Casino-Tampa.

More than four-in-ten Florida residents (41%) and three-in-ten non-Florida residents (29%) who have gambled in Florida, have gambled at the Seminole Hard Rock Hotel & Casino in Tampa, while approximately one-quarter has gambled at the Seminole Hard Rock Hotel and Casino in Hollywood. Approximately one-in-ten have gambled at the Seminole Casino Coconut Creek.

Non-Florida residents are significantly more likely than their Florida counterparts to have gambled at the Tampa Bay Downs (12% vs. 7%), Seminole Casino Immokalee (10% vs. 5%), Calder Casino/Tropical Park (8% vs. 4%), Daytona Beach Kennel Club/West Volusia (7% vs. 3%), Orlando Jai Alai (8% vs. 2%), Flagler Dog Track & Magic City Casino (6% vs. 2%), Seminole Casino Brighton (5% vs. 1%), Bestbet Jacksonville (3% vs. 1%), and Seminole Casino Big Cypress (5% vs. 1%). Florida residents, on the other hand, were significantly more likely to have gambled at Seminole Hard Rock Hotel & Casino in Tampa (41% vs. 29%).

Table 27:
Where in Florida have you gambled?

	Total Sample Yes % (n=892)*	Florida Residents Yes % (n=739)	Non-Florida Residents Yes % (n=153)
Seminole Hard Rock Hotel & Casino- Tampa	39.2	41.2[a]	29.3
Seminole Hard Rock Hotel & Casino- Hollywood	26.4	26.8	24.6
Seminole Casino Coconut Creek	11.3	11.7	9.5
Seminole Casino Hollywood	10.9	10.6	12.7
Casino Style Gaming Centers (e.g. internet/sweepstakes cafe)	3.9	10.6	5.6
Gulfstream Park	10.1	9.5	13.5
Tampa Bay Downs	7.8	6.9	11.9[a]
Miccosukee Resort & Gaming	6.6	6.5	7.1
The Isle at Pompano Park	5.5	5.7	4.8
Seminole Casino Immokalee	5.9	5.2	9.5[a]
Derby Lane	4.1	4.4	2.4
Casino Boats (Day Cruise- Off Shore)	9.7	4.3	2.4
Mardi Gras Casino/Racetrack	4.2	4.1	4.8
Calder Casino/Tropical Park	4.3	3.6	7.9[a]
Daytona Beach Kennel Club/West Volusia	3.8	3.2	7.1[a]
Dania/Summersport Jai Alai	3.6	3.2	5.6
Tampa Greyhound Track	3.8	3.0	7.9
Naples Fort Myers Greyhound	3.0	2.5	5.6
Palm Beach Kennel Club/P B Greyhound	2.8	2.5	4.0
Sarasota Kennel Club	2.9	2.5	4.8
Miami/Summer Jai Alai	2.9	2.2	6.3

Ocala Poker & Jai Alai	2.6	2.2	4.8
Orlando Jai Alai	3.0	2.1	7.9[a]
Flagler Dog Track & Magic City Casino	2.2	1.6	5.6[a]
Melbourne Greyhound Park	1.4	1.4	1.6
Orange Park Kennel Club	1.4	1.4	1.6
Seminole Casino Brighton	1.8	1.3	4.8[a]
Ebro Greyhound Park	1.4	1.3	2.4
Fort Pierce Jai Alai	1.6	1.3	3.2
Sanford Orlando/Penn Sanford	1.4	1.1	3.2
Bestbet Jacksonville	1.3	0.9	3.2[a]
Magic City Jai Alai	1.2	0.9	2.4
Seminole Casino Big Cypress	1.4	0.8	4.8[a]
OBS South Marion	1.1	0.8	2.4
Pensacola Greyhound Track	1.4	0.6	5.6
Jefferson County Kennel Club	0.5	0.5	0.8
St. Johns Greyhound Park	1.2	0.3	5.6
Hamilton Jai Alai	0.4	0.0	2.4

**Of those who have gambled in Florida (n=892)*

**Does not equal 100%. Multiple responses allowed.*

a - Denotes a significant difference from Florida residents and non-Florida residents

Likelihood of Gambling in Florida in the Future

More than half of respondents interviewed indicated they are not at all likely/ unlikely to gamble in Florida in the future, while one-quarter (26%) indicate they are extremely likely/ likely to gamble in Florida in the future.

Florida residents are significantly more likely than their non-Florida counterparts to gamble in Florida in the future with more than one-third of Florida residents (36%) being extremely likely/likely to gamble in the State in the future compared to approximately one-in-seven non-Florida residents (15%). Non-Florida residents are significantly more likely to indicate that it is not at all likely that they will gamble in the State of Florida in the future (46% vs. 23%). Roughly one in five respondents is neutral in their likelihood.

Table 28:
How likely are you to gamble in Florida in the future?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (N=1213)
Not at all likely	34.6	23.1	46.2[a]
Unlikely	17.1	17.9	16.3
Neutral	22.6	23.0	22.2
Likely	12.2	15.4[a]	9.0
Extremely Likely	13.5	20.7[a]	6.3

Entire sample (n=2436)

a - Denotes significant difference between Florida residents and Non-Florida Residents

Likelihood of Gambling in Florida in the Future – Florida Residents by Region

Approximately one-in-three Florida respondents is extremely likely/likely to gamble in Florida in the future. Roughly four-in-ten South (36%) and Central Florida residents (38%) and one-third of North Florida residents (32%) are extremely likely/likely to gamble in Florida in the future.

It is important to note that, conversely, nearly half (48%) of North Florida residents, and four-in-ten South (42%) and Central (38%) Florida residents are not at all likely/unlikely to gamble in Florida in the future. Between one-in-four and one-in-five Florida residents is neutral.

Table 29:
How likely are you to gamble in Florida in the future?
Florida Residents by Region

	North Florida Residents % (n=187)	Central Florida Residents % (n=553)	South Florida Residents % (n=483)
Not at all likely	25.4	21.9	23.4
Unlikely	22.1	16.3	18.4
Neutral	20.4	24.2	22.2
Likely	15.5	15.7	15.1

Extremely Likely	16.6	21.9	20.9

Of all Florida residents (n=1223)

Likelihood of Gambling in Select Florida Gambling Venues

Roughly, seven in ten (68%) of respondents who are extremely likely/likely to gamble in Florida in the future are likely to play the lottery, while approximately two-thirds (68%) are likely to gamble at an Indian Casino. One in five is likely to gamble at a pari-mutuel facility – horse racetrack (21%) or dog racetrack (18%).

Of those who are likely to gamble in Florida in the future, Florida residents are significantly more likely than non-Florida residents to play the lottery in the future (76% vs. 48%), while non-Florida residents are significantly more likely to gamble at gaming parlors in Florida (17% vs. 6%) or Internet/Sweepstakes café (12% vs. 5%).

Table 30:
For those who are likely to gamble in Florida in the future, where are you likely to gamble?

	Total Sample % (n=591)*	Florida Residents % (N=442)	Non-Florida Residents % (N=149)
Lottery in Florida	68.1	76.4[a]	48.4
Indian Casino	67.8	68.7	65.6
Pari-mutuel facility- horse racetrack	21.1	20.9	21.5
Pari-mutuel facility- dog race-track	18.3	18.6	17.7
Other	7.5	8.8	4.3
Pari-mutuel facility- Jai-Alai	8.3	7.9	9.1
Gaming parlors in Florida	9.6	6.3	17.2[a]
Internet/Sweepstakes café	7.2	5.2	11.8[a]

**Top two box score: Of those who are extremely likely/likely to gamble in the future (n=591)*

a - Denotes significant difference between Florida residents and Non-Florida Residents

Likelihood of Gambling in Select Florida Gambling Venues – Florida Residents by Region

Nearly nine-in-ten North Florida residents (88%), three-quarters of Central Florida residents (76%), and seven-in ten-South Florida residents (73%) are likely to gamble in the future by playing the lottery in Florida. Roughly seven-in-ten Florida respondents indicate that they are likely to gamble in the future by playing at an Indian Casino.

A larger proportion of North Florida residents (28%) are likely to gamble in the future at a Pari-mutuel facility dog track than their South and Central Florida counterparts (20% and 15%), while a larger proportion of South Florida residents (24%) are likely to gamble at a Pari-mutuel facility horse track than their Central and North Florida counterparts (19% and 17%).

Table 31:
For those who are likely to gamble in the future, where are you likely to gamble?
Florida Residents by Region

	North Florida Residents % (n=58)	Central Florida Residents % (n=208)	South Florida Residents % (n=176)
Lottery in Florida	87.9	76.0	73.0
Indian Casino	69.0	67.3	70.1
Pari-mutuel facility- horse racetrack	17.2	18.8	24.1
Pari-mutuel facility- dog racetrack	27.6	15.4	19.5
Other	7.9	6.0	3.0
Pari-mutuel facility- Jai-Alai	8.6	6.7	9.2
Gaming parlors in Florida	10.3	5.8	5.7
Internet/Sweepstakes café	8.6	3.8	5.7

Of those who are extremely likely/likely to gamble in Florida in the future (n=442)

a - Denotes significant difference between Florida residents and Non-Florida Residents

Spending on Gambling in the State of Florida

For respondents who indicated they have gambled in Florida during the past year, they gambled approximately $475.02 during that period.

Florida residents spent a significantly larger amount of money on gambling in the State of Florida during the past 12 months than their non-Florida counterparts ($698 vs. $253).

Table 32:
How much did you spend on gambling in the State of Florida during the past 12 months?

	Total Sample (n=1180)*	Florida Residents (n=739)	Non-Florida Residents (n=153)
Average dollar amount in last year	$475.02	$698.22[a]	$253.33

**Of those who gambled in Florida during the past year (n=892)*

a - Denotes significant difference between Florida residents and non-Florida residents

Estimated Future Spending on Gambling – This Year as Compared to Last Year

Roughly six in ten of respondents interviewed (61%) expect to spend the same amount on gambling this year as they did in the previous year.

Roughly six in ten Florida residents (60%) and non-Florida residents (61%) interviewed expect to spend the same amount on gambling this year as they did in the previous year.

Table 33:
Do you estimate spending the same amount this year in gambling as last year?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Yes	60.7	60.3	61.0
No	13.5	12.6	14.4
Don't know/not sure	24.5	26.1	22.9
Refused	1.4	1.0	1.7

Of all respondents (n=2436)

SENTIMENTS REGARDING GAMBLING IN FLORIDA

Attitudes toward Gambling in General

Roughly half (47%) of respondents interviewed are neutral toward gambling opportunities in general while (11%) supports/supports but will not participate in gambling. Approximately, one in ten (8%) opposes gambling.

Table 34:
How do you feel about gambling opportunities in general?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Neutral- neither support nor oppose	46.9	46.5	47.4
I support gambling	31.6	32.1	31.0
I oppose gambling	8.0	7,7	8.3
I support gambling but will not participate	10.5	11.2	9.9
No opinion	3.0	2.5	3.5

Of all respondents (n=2436)

Attitudes toward Gambling in General – Florida Residents by Region

More than half (53%) are neutral towards the expansion of gambling opportunities within the State. Roughly 28% from each region supports expanding gambling and 7% opposes the expansion of gambling opportunities in the State.

Table 35:
How do you feel about gambling in general?
Florida Residents by Region

	North Florida Residents % (n=181)	Central Florida Residents % (n=553)	South Florida Residents % (n=489)
Neutral- neither support nor oppose	53.0	45.0	45.8
I support expanding gambling in Florida	27.6	32.4	33.7
I oppose expanding gambling in Florida	6.6	7.2	8.3
I support expanding gambling in Florida but will not participate	11.0	12.3	10.1
No opinion	1.7	3.1	2.1

Of all Florida residents (n=1223)

Attitudes toward Expanded Gambling Opportunities in Florida

More than four in ten (42%) of respondents interviewed are neutral toward expanding gambling opportunities in Florida, while (40%) supports/supports but will not participate expanded gambling in the State. Approximately, one in ten (11%) opposes the expansion of gambling in the State.

Nearly half of non-Florida residents (48%) and four-in-ten Florida residents (37%) are neutral towards expanding gambling opportunities in Florida.

More than one-third of Florida residents (36%) and one-in-five non-Florida residents (21%) support expanding gambling in Florida.

Roughly one-in-seven Florida residents (13%) and less than one-in-ten non-Florida residents (8%) oppose expanded gambling in the State of Florida.

Table 36:
How do you feel about expanding gambling opportunities in Florida?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Neutral- neither support nor oppose	42.4	37.1	47.8
I support expanding gambling in Florida	28.4	36.1	20.6
I oppose expanding gambling in Florida	10.6	13.0	8.2
I support expanding gambling in Florida but will not participate	8.9	10.4	7.3
No opinion	9.7	3.4	16.0

Of all respondents (n=2436)

Attitudes toward Expanded Gambling Opportunities in Florida – Florida Residents by Region

Nearly four-in-ten residents in each of the three Florida regions are neutral towards the expansion of gambling opportunities within the State. Roughly one-third from each region supports expanding gambling and one-in-seven opposes the expansion of gambling opportunities in the State.

Table 37:
How do you feel about expanding gambling opportunities in Florida?
Florida Residents by Region

	North Florida Residents % (n=181)	Central Florida Residents % (n=553)	South Florida Residents % (n=483)
Neutral- neither support nor oppose	39.2	36.2	37.5
I support expanding gambling in Florida	33.7	37.3	35.8
I oppose expanding gambling in Florida	13.8	13.2	12.2
I support expanding gambling in Florida but will not participate	10.5	10.1	10.8
No opinion	2.8	3.3	3.7

Of all Florida residents (n=1223)

Attitudes toward Reducing Gambling Opportunities in Florida

Roughly half (47%) of respondents interviewed are neutral toward reducing gambling opportunities in Florida, while one in ten (10%) supports/supports but will not participate reducing gambling in the State. Approximately, three in ten (31%) opposes the reduction of gambling in the State.

Nearly half of non-Florida residents (48%) and four-in-ten Florida residents (37%) are neutral towards the reduction of gambling opportunities in Florida.

More than one-third of Florida residents (36%) and one-in-five non-Florida residents (21%) support reducing gambling in Florida.

Roughly one-in-seven Florida residents (13%) and less than one-in-ten non-Florida residents (8%) oppose reducing of gambling in the State of Florida.

Table 38:
How do you feel about reducing gambling opportunities in Florida?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Neutral- neither support nor oppose	47.1	42.4	51.8
I support reducing the opportunities to gamble in Florida	7.1	7.6	6.5
I oppose reducing opportunities for gambling in Florida	31.0	40.7	21.2
I support reducing gambling in Florida but will not participate	3.4	4.3	2.5
No opinion	11.4	4.9	17.9

Of all respondents (n=2436)

Attitudes toward Expanded Gambling in Florida – Florida Residents by Region

Between four in ten and half (41% - 48%) of residents in each of the three Florida regions are neutral towards the reduction of gambling opportunities within the State. Roughly one in ten (7%) from each region supports reducing gambling and almost four in ten (40%) opposes the reduction of gambling opportunities in the State.

Table 39:
How do you feel about reducing gambling opportunities in Florida?
Florida Residents by Region

	North Florida Residents % (n=181)	Central Florida Residents % (n=553)	South Florida Residents % (n=489)
Neutral- neither support nor oppose	48.1	41.8	41.2
I support reducing the opportunities to gamble in Florida	7.2	7.1	8.3
I oppose reducing opportunities for gambling in Florida	37.6	40.9	41.6
I support reducing gambling in Florida but will not participate	4.4	4.5	4.1
No opinion	2.8	5.8	4.8

Of all Florida residents (n=1223)

Attitudes towards the Expansion, Restriction or Reduction of Type of Gambling in Florida

Depending on the type of gambling, between four-in-ten and six-in-ten respondents have no opinion towards the expansion, restriction, or reduction of gambling in Florida (range 45% to 58%).

In nearly every type of gambling indicated, a slightly higher proportion of respondents would like to see gambling expanded (range 11% to 33%) as compared to restricted (range 6% to 13%) or reduced (range 6% to 16%).

Table 40:
Which of the following gambling opportunities would you like to see expanded or restricted or reduced in Florida?
All respondents

	Expanded %	Restricted %	Reduced %	No Opinion %	Don't Know %
Casino Gambling at tribal facilities	26.2	8.0	8.0	50.6	7.2
Casino gambling at commercial resorts	32.6	9.2	6.7	44.6	6.8
Lottery	31.7	5.6	6.4	50.3	6.1
Gambling at internet sweepstakes cafes	11.3	12.8	15.7	51.8	8.5
Casino gambling at Horse Racetracks	18.3	10.1	10.0	54.2	7.4
Casino gambling at dog racetracks	16.6	11.5	12.1	52.2	7.5
Casino Gambling at Jai-alai Frontons	14.9	8.5	6.9	58.1	11.6
Sports Betting	21.0	10.4	8.3	52.7	7.6
Online Gambling	14.0	13.2	13.2	51.9	7.6

Of all respondents (n=2436)

Attitudes towards the Expansion, Restriction, or Reduction of Type of Gambling in Florida – Florida Residents by Region

With the exception of casino gambling at commercial resorts and the lottery, a larger proportion of Florida residents have no opinion towards the expansion, restriction, or reduction of types of gambling opportunities in Florida (range 35% to 53%).

Roughly four-in-ten Florida residents would like to see expanded casino gambling at commercial resorts (41%), casino gambling at tribal facilities (33%), and the lottery (37%) as compared to approximately one-in-ten who would like to see it restricted or reduced.

One-quarter (24%) of Florida residents would like to see the expansion of sports betting, while approximately one-in-five would like to see the expansion of casino gambling at horse racetracks, dog racetracks, and Jai-alai frontons.

Approximately one-in-five Florida residents would like to see the reduction of gambling at Internet sweepstakes cafes (17%), a similar proportion to those who would like to see the restriction of online gambling (16%).

Table 41:
Which of the following gambling opportunities would you like to see expanded or restricted or reduced in Florida?
Florida Residents

	Expanded %	Restricted %	Reduced %	No Opinion %	Don't Know %
Casino Gambling at tribal facilities	33.1	9.2	7.9	44.3	5.4
Casino gambling at commercial resorts	40.8	11.2	7.2	35.9	4.9
Lottery	37.4	6.7	7.5	44.2	4.2
Gambling at internet sweepstakes cafes	13.1	17.3	19.8	43.3	6.6
Casino gambling at Horse Racetracks	21.5	12.7	11.2	48.9	5.7
Casino gambling at dog racetracks	20.8	13.4	12.7	47.4	5.7
Casino Gambling at Jai-alai Frontons	18.8	10.7	7.6	53.4	9.7
Sports Betting	24.1	12.4	9.5	47.6	6.4
Online Gambling	16.1	16.4	15.6	46.1	5.8

Of all Florida respondents (n=1223)

Attitudes towards Expansion, Restriction, or Reduction of Type of Gambling in Florida – Non-Florida Residents

The majority of all non-Florida respondents have no opinion towards the expansion, restriction, or reduction of each type of gambling in Florida (range 54% to 60%).

A larger proportion (one-quarter) of non-Florida respondents would like to see casino gambling at tribal facilities (19%) and commercial resorts (24%), the lottery (26%), sports betting (18%), casino gambling at horse tracks (15%), casino gambling at dog tracks (13%), online gambling (12%), and casino gambling at jai-alai frontons (11%) expanded as compared to restricted or reduced.

A slightly larger proportion of non-Florida residents would like to see gambling at Internet sweepstakes cafes reduced (12%) as compared to expanded (10%) or restricted (8%).

Table 42:
Which of the following gambling opportunities would you like to see expanded or restricted or reduced in Florida?
Non-Florida Residents

	Expanded %	Restricted %	Reduced %	No Opinion %	Don't Know %
Casino Gambling at tribal facilities	19.3	6.7	8.1	56.8	9.0
Casino gambling at commercial resorts	24.3	7.2	6.3	53.4	8.8
Lottery	25.9	4.5	5.3	56.3	8.0
Gambling at internet sweepstakes cafes	9.5	8.2	11.6	60.4	10.4
Casino gambling at Horse Racetracks	15.1	7.6	8.7	59.5	9.0
Casino gambling at dog racetracks	12.5	9.6	11.6	56.9	9.4
Casino Gambling at Jai-alai Frontons	11.3	6.3	6.2	57.8	13.4
Sports Betting	17.8	8.4	7.1	54.7	8.8
Online Gambling	11.9	10.1	10.9	55.5	4.7

Of all non-Florida respondents (n=1213)

Attitudes towards Additional Restrictions or Limits on Gambling in Florida – Florida vs. Non-Florida Residents

The majority of Florida residents (67%) and non-Florida residents (78%) are less likely to be in favor of expanding gambling in Florida if additional restrictions or limits were placed on gambling in the State.

Alternatively, roughly one-in-ten Florida residents (8%) and one-in-twenty (5%) non-Florida residents are likely to favor expanding gambling in Florida if additional restrictions or limits were put on gambling in the State.

Table 43:
If there were additional restrictions or limits were put on gambling in Florida, would you be more likely to favor expanding gambling in Florida?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Yes	6.6	7.5	5.0
No	71.4	67.3	78.0
Don't know/not sure	22.0	25.3	17.0

Of all respondents (n=2436)

Attitudes towards Additional Restrictions or Limits on Gambling in Florida – Florida Residents by Region

A larger proportion of South Florida residents (82%) than those in Central (62%) and North (52%) Florida would be less likely to be in favor of expanded gambling in Florida if additional restrictions or limits were placed on gambling in the State.

Less than one-in-ten Florida residents, regardless of region, would be in favor of expanding gambling in Florida if there were additional restrictions or limits on gambling in the State.

Table 44:
If there were additional restrictions or limits were put on gambling in Florida, would you be more likely to favor expanding gambling in Florida?
Florida Residents by Region

	North Florida Residents % (n=25)	Central Florida Residents % (n=73)	South Florida Residents % (n=59)
Yes*	4.0	9.6	5.1
No	52.0	61.6	81.4
Don't Know/ Not sure	44.0	28.8	13.6

Florida residents who oppose gambling (n=157)
**Note: please interpret with caution as sample sizes are small in regions*

IMPACT OF EXPANDED GAMBLING ON FLORIDA'S TOURISM INDUSTRY

Importance of the Gambling Industry to the Travel and Tourism Industry

More than one-third of respondents interviewed (30%) believe that the gambling industry is an extremely/very important contributor to the overall travel and tourism industry.

More than one-third of Florida residents (41%) believe that the gambling industry is an extremely/very important contributor to the overall travel and tourism industry, as compared to one-in-five non-Florida residents (20%).

Alternatively, more than four-in-ten (43%) non-Florida residents and one-quarter of Florida residents (24%) believe that the gambling industry is not at all/not a very important contributor to the overall travel and tourism industry.

Table 45:
How important do you think the gambling industry is in terms of contribution to the overall travel and tourism industry?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Not at all important	16.4	10.5	22.5
2	16.8	13.6	20.0
3	36.2	34.9	37.5
4	19.4	24.4	14.5
Extremely important	11.2	16.7	5.6

Of all respondents (n=2436).

Likelihood to Visit Florida if Gambling Opportunities are Expanded

More than three-quarters of non-Florida residents (78%) who have visited Florida are not likely to change their visitation intentions to Florida if gambling opportunities are expanded in the State. Slightly more than one-in-ten (12%) would visit more, while less than one-in-twenty (4%) would visit less.

Table 46:
IF Florida expanded gambling opportunities would you come to Florida?

	Non-Florida Residents % (n=497)*
More	12.1
Less	3.8
The Same	78.4
Don't know	5.6

**Of non-Florida residents who have visited Florida during the past 2 years (n=497)*

Likelihood to Visit Florida if Gambling Opportunities are Reduced

More than eight-in-ten (82%) non-Florida residents who have visited Florida would visit Florida the same amount if gambling opportunities were reduced, while a similar proportion would visit more (4%) or less (6%).

Table 47:
IF Florida reduced gambling opportunities would you come to Florida?

	Non-Florida Residents % (n=497)*
More	4.4
Less	6.3
The Same	82.7
Don't know	6.7

**Of non-Florida residents who have visited Florida during the past 2 years (n=497)*

Visitation to Florida if Gambling Opportunities are Expanded – Non Visitors to Florida during the Last 24 Months

Roughly half of the non-Florida residents who have not visited Florida during the last 24 months indicate that they would not come to Florida if gambling opportunities are expanded in the State.

Nearly one-in-four (37%) don't know.

Table 48:
IF Florida expanded gambling opportunities would you then come to Florida?
Non-Visitors to Florida During The Last 24 Months

	Non-Florida Residents % (n=713)
Yes	9.2
No	54.0
Don't Know	36.8

Of the non-Florida residents who have not visited Florida during the last 2 years (n=713)

Visitation to Florida if Gambling Opportunities are Reduced – Non Visitors to Florida during the Last 24 Months

Approximately one-half (49%) of the non-Florida residents who have not visited Florida during the last 24 months indicate that they would not come to Florida if there were reduced gambling opportunities in the State.

Nearly four-in-ten (39%) don't know.

Table 49:
IF Florida reduced gambling opportunities would you come to Florida?
Non-Visitors to Florida During The Last 24 months

	Non-Florida Residents % (n=713)
Yes	11.7
No	49.4
Don't Know	38.9

Of those who are non-visitors to Florida (n=713)

Likelihood to Visit Florida if Gambling Opportunities are Restricted – Non Visitors to Florida during the Last 12 Months

Roughly one-half (49%) of non-Florida residents who have not visited Florida during the last 24 months indicate that they would not come to Florida if gambling opportunities were restricted in the State.

Nearly four-in-ten (39%) don't know.

Table 50:
IF Florida restricted gambling opportunities would you come to Florida?
Non-Visitors to Florida During The Last 12 Months

	Non-Florida Residents % **(n=713)**
Yes	11.7
No	49.4
Don't Know	38.9

Of the non-Florida residents who have not visited Florida during the last 2 years (n=713)

Likelihood to Stay Longer in Florida if Gambling Opportunities are Expanded – Non Visitors to Florida during the Past 2 Years

Approximately one-in-six (15%) of non-Florida residents would stay for a longer period of time in Florida if gambling were expanded in the state, while six in ten would not stay longer (62%).

Roughly one-quarter (23%) don't know.

Table 51:
If Gambling were expanded in the State of Florida, would you choose to stay in Florida for a longer period of time?
Non-Florida Residents

	Non-Florida Residents % (n=497)*
Yes	14.9
No	61.7
Don't Know	23.4

Of the non-Florida residents who have visited Florida during the past 2 years (n=497)

Likelihood to Stay Longer in Florida if Gambling Opportunities are Reduced – – Non Visitors to Florida during the Past 2 Years

Approximately one-in-twenty (3%) non-Florida residents would stay for a longer period of time in Florida if gambling were reduced in the State.

Slightly more than two-in-ten (22%) don't know.

Table 52:
If Gambling were reduced in the State of Florida, would you choose to stay in Florida for a longer period of time?
Non-Florida Residents

	Non-Florida Residents % (n=497)*
Yes	3.2
No	74.4
Don't Know	22.4

Of the non-Florida residents who have visited Florida during the past 2 years (n=497)

Likelihood to Gamble in the State of Florida if Gambling Opportunities are Expanded – Florida Residents

Nearly half of Florida residents (48%) are likely to gamble in the State rather than take a trip outside the State if gambling were expanded in Florida.

One-third of Florida residents (35%) are not likely and less than one-in-five (18%) don't know.

Table 53:
If Gambling were expanded in the State of Florida, would you be more likely to gamble in the State rather than take a trip outside the State?
Florida Residents

	Non-Florida Residents % (n=497)*
Yes	47.6
No	34.6
Don't Know	17.8

Of all Florida respondents (n=1223)

Likelihood to Gamble in the State of Florida if Gambling Opportunities are Reduced – Florida Residents

Half of Florida residents (51%) are not likely to gamble in the State rather than take a trip outside the State if gambling were reduced in Florida.

One-in-three Florida residents (29%) are likely and one-in-five (20%) don't know.

Table 54:
If Gambling was reduced in the State of Florida, would you be more likely to gamble out of the State rather than gamble in the State?
Florida Residents

	Non-Florida Residents % (n=497)*
Yes	28.6
No	51.1
Don't Know	20.3

Of all Florida respondents (n=1223)

Expected Impact of Spending on Entertainment Spending if Gambling is Reduced in the State – Florida Residents

In nearly every category of spending, the majority of Florida residents would spend the same amount on each type of entertainment if gambling opportunities were reduced in Florida (range 77% to 63%).

One-in-five Florida residents would spend more on travel (20%), one-in-seven would spend more on shopping (15%), bars/restaurants (14%), recreation/sports (14%), and shows (14%) if gambling opportunities were reduced in Florida.

Table 55:
If Florida reduced gambling opportunities in the State, which types of activities/ entertainment would you spend more or less in?
Florida Residents

	Spend More	Spend Less	Spend the same	Don't Know
Travel	20.1	5.6	66.6	7.6
Shopping	14.8	3.3	76.9	5.0
Bars and Restaurants	14.1	5.7	73.9	6.3
Recreation/Sports	13.9	7.0	69.7	9.5
Shows	13.7	6.0	71.6	8.7
Nightlife/Clubs	9.2	8.5	70.5	11.8
Lodging	7.9	6.6	75.6	9.8
Casino Gambling	7.9	15.9	63.3	12.9
Spa/Salon	7.7	7.1	72.9	12.3
Conventions and Meetings	4.2	7.8	70.4	17.7

Of all Florida respondents (n=1223)

Benefits of Expanding or Reducing Gambling – Florida Residents vs. Non-Florida Residents

Approximately four in ten (43%) of respondents interviewed believe that expanding gambling in Florida would result in a more favorable outcome for the State. Roughly four in ten (43%) don't know.

Florida residents (54%) are significantly more likely to believe that expanding gambling in the State would result in a more favorable outcome for the State of Florida than their non-Florida counterparts (33%).

Interestingly, non-Florida residents are significantly more likely (55%) than their Florida counterparts (32%) to not know if expanding or reducing gambling in the State would have a more favorable outcome for the State of Florida.

Table 56:
Which would have a more favorable outcome for the State of Florida?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Expanding Gambling in Florida	43.2	53.6[a]	32.7
Reducing Gambling in Florida	13.6	14.8	12.4
Don't know	43.2	31.6	54.9[a]

Of all respondents (n=2436)

a - Denotes a significant difference between Florida residents and non-residents

Benefits of Expanding or Reducing Gambling – Florida Residents by Region

Roughly half of Florida residents in each Florida region believe that expanding gambling in the State would result in a more favorable outcome for the State of Florida (range 49% to 55%).

Roughly one-in-six Florida residents in each region believe that reducing gambling in Florida would have a more favorable outcome for the State of Florida (range 13% to 16%).

Roughly one-in-three in each region don't know (range 30% to 36%).

Table 57:
Which would have a more favorable outcome for the State of Florida?
Florida Residents by Region

	Central Florida Residents % (n=181)	North Florida Residents % (n=553)	South Florida Residents % (n=489)
Expanding Gambling in Florida	49.2	55.2	53.6
Reducing Gambling in Florida	15.2	13.4	15.9
Don't know	35.4	31.5	30.4

Of all Florida respondents (n=1223)

Who Benefits from Expanded Gambling Opportunities in the State of Florida

Nearly seven-in-ten respondents (68%) believe that residents would benefit from expanding gambling in the State, while approximately six-in-ten believe that tourists would benefit from expanded gambling in the State.

At least seven-in-ten Florida residents believe that residents and tourists would benefit from expanding gambling in the State, while approximately six-in-ten non-Florida residents believe that residents and tourists would benefit from expanded gambling in the State.

Table 58:
Who would benefit from expanding gambling in the State of Florida?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Residents	68.7	70.0	67.3
Tourists	67.5	74.4	60.0
Not sure	12.5	8.8	16.2

Of all respondents (n=2436)
**Note: does not round to 100 due to multiple responses*

Who Benefits from Reduced Gambling Opportunities in the State of Florida

At least six-in-ten Florida residents in each region believe that residents and tourists would benefit from reduced gambling opportunities in Florida (range 65% to 75%).

Table 59:
Who would benefit from reducing gambling in the State of Florida?
Florida Residents by Region

	North Florida Residents % (n=189)	Central Florida Residents % (n=553)	South Florida Residents % (n=489)
Residents	64.6	71.9	70.0
Tourists	73.8	74.9	74.2
Not sure	9.4	9.4	7.7

Of all Florida respondents (n=1223)
**Note: does not round to 100 due to multiple responses*

Likelihood to Visit Select Florida Destinations if Gambling is Expanded

The majority of respondents indicate that they are more likely to visit each of the Florida destinations listed if more opportunities for gambling existed (range 77% to 92%).

Table 60:
Would you be more likely, equally likely or less likely to visit the following Florida locations if more opportunities for gambling existed?*
All Respondents

	Less Likely %	More Likely %
Orlando	22.8	77.2
Tampa/St. Pete	17.2	82.8
Jacksonville	8.1	91.9
Naples	9.0	91.0
Miami	16.5	83.5
Panama City/ Fort Walton Beach	8.8	91.2
Daytona Beach	12.5	87.5
West Palm Beach	10.4	89.6
Ft. Lauderdale	14.1	85.9

Of all respondents (n=2436)

Responses were coded as dichotomous 0=less likely, 1=more likely

Benefits of Gambling To Florida – Florida Residents vs. Non-Florida Residents

More than six in ten respondents believe that gambling offers the benefits of creating more jobs in the State or community (61%), while half believe that gambling would attract more visitors to the state (54%), or generate more revenue for local and small business (49%).

Florida residents are significantly more likely to believe that gambling offers the benefits of creating more jobs in the State or community (69% vs. 53%), attracting more visitors to the state (63% vs. 46%), generating more revenue for local and small businesses (55% vs. 44%), attracting more investment in the state or community (40% vs. 26%), and creating a positive impact on the cultural identity of the community (12% vs. 8%) than non-Florida residents.

Alternatively, non-Florida residents are significantly more likely to believe that gambling creates additional tax revenue for the state and local governments (44% vs. 34%) and are not sure or don't know what benefits gambling offers (21% vs. 8%).

Table 61:
Which of the following benefits do you believe gambling offers Florida?*

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Create more jobs in the state or your community	61.2	69.3[a]	53.0
Attract more visitors to the state	54.4	63.1[a]	45.7
Generate more revenue for local and small businesses	49.3	54.7[a]	43.9
Attract more investment to the state or your community	33.1	40.1[a]	26.1
Create additional tax revenue for state and local governments	40.9	34.0	44.2[a]
Create a positive impact on the cultural identity of the community	9.7	11.8[a]	7.6
Don't know/not sure	14.8	8.2	21.4[a]
There would be no benefit to having destination casino resorts in Florida	7.2	7.6	6.8

Of all respondents (n=2436)

a - Denotes a significant difference from Florida residents and non-residents

Benefits of Gambling To Florida – Florida Residents by Region

Across the three regions of Florida, a larger proportion of residents believe that gambling offers Florida the most benefits in terms of creating more jobs in the state or community (range 66% to 71%), creating additional tax revenue for state and local governments (range 65% to 67%), attracting more investment to the state or community (range 62% to 65%), and generating more revenue for local and small businesses (range 53% to 56%).

Table 62:
Which of the following benefits do you believe gambling offers Florida?*
Florida Residents by Region

	North Florida Residents % (n=181)	Central Florida Residents % (n=583)	South Florida Residents % (n=489)
Create more jobs in the state or your community	65.7	69.1	71.0
Create additional tax revenue for state and local governments	65.2	66.7	65.6
Attract more investment to the state or your community	64.6	62.2	64.0
Generate more revenue for local and small businesses	53.0	56.4	53.6
Attract more visitors to the state	40.9	40.3	40.0
Create a positive impact on the cultural identity of the community	12.2	12.8	10.4
There would be no benefit to having destination casino resorts in Florida	7.7	8.5	6.4

Of all Florida Respondents (n=1223)
**Multiple responses allowed.*

PREFERRED GAMBLING REGULATIONS

Preferences toward Gambling Regulations – Florida Residents vs. Non-Florida Residents

More than five in ten respondents believe that the State should regulate gambling at Internet sweepstakes cafes, arcades and truck stops.

More than six-in-ten Florida residents and half of non-Florida residents believe that the State should regulate gambling at Internet sweepstakes cafes, arcades, and truck stops.

Table 63:
Should the state regulate gambling at?
(% Yes)

	Total Sample % Yes (n=2436)			Florida Residents % Yes (n=1223)			Non-Florida Residents % Yes (n=1213)		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
Internet sweepstakes cafes	59.4	14.8	25.8	65.6	13.7	20.8	53.2	16.0	30.8
Arcades	57.6	17.6	24.8	61.7	17.3	20.9	53.5	17.9	28.6
Truck stops	57.7	16.5	25.8	61.0	16.0	23.0	54.4	16.9	28.7

Of all respondents (n=2436)

a - Denotes a significant difference between Florida residents and Non-residents

Preferences toward Gambling Regulations – Florida Residents by Region

Residents in Central and South Florida are significantly more likely than their North Florida counterparts to believe the State should regulate gambling at Internet sweepstakes cafes, arcades, and truck stops.

Table 64:
Should the state regulate gambling at?
Florida Residents by Region
(% Yes)

	North Florida Residents % (n=181)			Central Florida Residents % (n=553)			South Florida Residents % (n=483)		
	Yes	No	DK	Yes	No	DK	Yes	No	DK
Internet sweepstakes cafes	59.1	16.6	24.3	68.7[a]	12.1	19.2	64.4	14.5	21.1
Arcades	53.3	20.4	26.0	63.7[a]	16.5	19.9	62.7	17.2	20.1
Truck stops	53.3	18.2	28.2	63.5[a]	15.2	21.3	61.1	16.1	22.8

Of all Florida respondents (n=1223)

a - Denotes a significant difference between Florida residents by region

Preferences toward Prohibiting Gambling – Florida Residents vs. Non-Florida Residents

Roughly one in three respondents interviewed believe that the State should prohibit gambling at Internet sweepstakes cafes, arcades, and truck stops.

One-third or more of Florida residents and approximately two-in-ten non-Florida residents believe that the State should prohibit gambling at Internet sweepstakes cafes, arcades, and truck stops.

Table 65:
Should the state prohibit gambling at?
(% Yes)

	Total Sample % Yes (n=2436)			Florida Residents % Yes (n=1223)			Non-Florida Residents % Yes (n=1213)		
	Yes	No	DK	Yes	No	DK	Yes	No	DK
Internet sweepstakes cafes	27.5	38.4	34.1	33.7	37.6	28.7	21.3	39.1[a]	39.6
Arcades	30.2	37.1	32.7	35.6	37.2	27.2	24.8	37.1[a]	38.2
Truck stops	28.2	38.1	33.6	33.5	37.3	29.2	22.9	39.0[a]	38.1

Of all respondents (n=2436)

a - Denotes a significant difference between Florida residents and Non-residents

Preferences toward Prohibiting Gambling – Florida Residents by Region

Approximately one-third of Florida residents in each region believe that the State should prohibit gambling at Internet sweepstakes cafes, arcades, and truck stops.

Table 66:
Should the state prohibit gambling at?
Florida Residents by Region
(% Yes)

	North Florida Residents % (n=181)			Central Florida Residents % (n=553)			South Florida Residents % (n=483)		
	Yes	No	DK	Yes	No	DK	Yes	No	DK
Internet sweepstakes cafes	35.4	32.0	32.6	34.9	38.9	26.2	31.7	28.5	29.8
Arcades	38.7	32.0	29.3	35.1	37.6	27.3	35.0	38.9	26.1
Truck stops	35.4	32.0	32.6	32.4	39.6	28.0	34.2	36.9	29.0

Of all Florida respondents (n=1217)

Preferences toward Taxing Gambling – Florida Residents vs. Non-Florida Residents

Approximately two-thirds of respondents interviewed believe that the State should tax gambling at Internet sweepstakes cafes, arcades, and truck stops.

More than two-thirds of Florida residents and six-in-ten non-Florida residents believe that the State should tax gambling at Internet sweepstakes cafes, arcades, and truck stops.

Table 67:
Should the state of Florida tax gambling at?
(% Yes)

	Total Sample % Yes (n=2436)			Florida Residents % Yes (n=1223)			Non-Florida Residents % Yes (n=1213)		
	Yes	No	DK	Yes	No	DK	Yes	No	DK
Internet sweepstakes cafes	63.7	14.8	21.5	68.4[a]	14.3	17.3	59.0	15.2	25.7
Arcades	63.3	14.8	21.9	67.5[a]	14.3	18.2	59.2	15.3	25.5
Truck stops	64.0	13.9	22.1	68.1[a]	13.6	18.3	60.0	14.2	25.8

Of all respondents (n=2436)

a - Denotes a significant difference between Florida residents and Non-residents

Preferences toward Taxing Gambling – Florida Residents by Region

More than two-thirds of Florida residents in each region believe that the State should tax gambling at Internet sweepstakes cafes, arcades, and truck stops.

Table 68:
Should the state of Florida tax gambling at?
Florida Residents by Region
(% Yes)

	North Florida Residents % (n=181)			Central Florida Residents % (n=553)			South Florida Residents % (n=483)		
	Yes	No	DK	Yes	No	DK	Yes	No	DK
Internet sweepstakes cafes	69.6	13.8	16.6	70.0	13.0	17.0	66.3	15.9	17.8
Arcades	69.6	13.3	17.1	68.7	12.5	18.8	65.4	16.8	17.8
Truck stops	69.1	13.8	17.1	69.4	12.7	17.9	66.5	14.5	19.0

Of all Florida respondents (n=1217)

Preferences toward Reducing Slot Machines at Pari-mutuel Facilities in Florida – Florida Residents vs. Non-Florida Residents

Roughly one-in-five respondents are in favor of the State of Florida reducing the number and operation of slot machines at Pari-mutuel facilities in Florida.

Florida residents (37%) are significantly less likely than their non-Florida counterparts (25%) to be in favor of reducing the number and operation of slot machines at Pari-mutuel facilities in Florida.

Non-Florida residents (58%) are significantly more likely than Florida residents (42%) to be unsure of whether they are in favor of reducing the number and operation of slot machines at Pari-mutuel facilities in Florida.

Table 69:
If the State of Florida were to reduce the number and operation of slot machines at Pari-mutuel facilities in Florida- would you be in favor of this?

	Total Sample % Yes (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Yes	19.2	21.2	17.3
No	30.9	37.2[a]	24.5
Don't Know/Not sure	49.9	41.6	58.2[a]

Of all respondents (n=2436)

a - Denotes a significant difference between Florida residents vs., non-Florida residents

Preferences toward Reducing Slot Machines at Pari-mutuel Facilities in Florida – Florida Residents by Region

Roughly one-in-five respondents in each region is in favor of the State of Florida reducing the number and operation of slot machines at Pari-mutuel facilities in Florida.

Slightly more South (38%) and Central (38%) Florida residents are less likely than their Central Florida counterparts (34%) to be in favor of reducing the number and operation of slot machines at Pari-mutuel facilities in Florida.

Approximately four-in-ten Florida residents in each region don't know.

Table 70:
If the State of Florida were to reduce the number and operation of slot machines at Pari-mutuel facilities in Florida- would you be in favor of this?
Florida Residents by Region[a]

	North Florida Residents % (n=181)	Central Florida Residents % (n=553)	South Florida Residents % (n=483)
Yes	21.5	21.2	20.9
No	34.3	37.6	38.1
Don't Know/Not sure	44.2	41.2	41.0

Of all Florida respondents (n=1217)

a - Denotes a significant difference between Florida residents by Region

Preferences toward Authorizing Table Games Slot at Pari-mutuel Facilities in Florida – Florida Residents vs. Non-Florida Residents

More than one in three (34%) respondents interviewed are in favor of the State of Florida authorizing Pari-mutuel facilities in Florida to conduct table games.

Florida residents (42%) are significantly more likely than their non-Florida counterparts (27%) to be in favor of the State of Florida authorizing Pari-mutuel facilities in Florida to conduct table games.

Non-Florida residents (54%) are significantly more likely than Florida residents (36%) to be unsure of whether they are in favor of the State of Florida authorizing Pari-mutuel facilities in Florida to conduct table games.

Table 71:
If the State of Florida were to authorize Pari-mutuel facilities in Florida to conduct table games - would you be in favor of this?

	Total Sample % Yes (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Yes	34.4	42.2[a]	26.6
No	20.6	21.9	19.3
Don't Know/Not sure	45.0	35.9	54.1[a]

Of all respondents (n=2436)

a - Denotes a significant difference between Florida residents vs. non-Florida Residents

Preferences toward Authorizing Table Games at Pari-mutuel Facilities in Florida – Florida Residents by Region

Central (43%) and South (43%) Florida residents are significantly more likely to be in favor of the State of Florida authorizing Pari-mutuel facilities in Florida to conduct table games than North Florida residents (37%), while more than one-third in each region don't know.

Table 71:
If the State of Florida were to authorize Pari-mutuel facilities in Florida to conduct table games - would you be in favor of this?
Florida Residents by Region

	North Florida Residents % (n=181)	Central Florida Residents % (n=553)	South Florida Residents % (n=483)
Yes	36.5	43.4[a]	43.3[b]
No	26.0	19.9	22.6
Don't Know/Not sure	37.6	36.7	34.2

Of all Florida respondents (n=1217)

a - Denotes a significant difference between Central Florida residents and North Florida Residents

b- Denotes a significant difference between South Florida residents and North Florida Residents

Preferences toward Pari-mutuel Facilities in Florida – Florida Residents and Non-Florida Residents

Approximately one-third of all respondents believe there should be no change in each of the types of pari-mutuel facilities in Florida.

Slightly more respondents believe the State should prohibit or reduce Greyhound racing as compared to other forms of pari-mutuel racing, while a slightly greater proportion would like to see the thoroughbred racing expanded as compared to other forms of pari-mutuel racing.

Approximately one-third don't know.

Table 73:
From your perspective, which changes to the following pari-mutuel facilities should the State of Florida consider?
All Respondents

	Prohibit % Yes	Reduce % Yes	Expand % Yes	No Change % Yes	DK % Yes
Thoroughbred racing	10.0	7.4	20.0	30.6	32.0
Harness racing	10.5	7.9	15.3	30.7	35.7
Quarter horse racing	10.1	7.7	16.1	30.6	35.5
Greyhound racing	17.5	11.7	11.8	28.0	31.0

Of all respondents (n=2436)

Preferences toward Pari-mutuel Facilities in Florida – Florida Residents

Approximately one-third of Florida residents believe there should be no change in each of the types of pari-mutuel facilities in Florida.

While one-in-five would like to see Greyhound racing prohibited and roughly one-in-ten or less would like to see each of the other forms of pari-mutuel racing prohibited.

Approximately one-in-five Florida respondents would like to see Thoroughbred, Harness, and Quarter horse racing expanded, while approximately one-quarter to one-third of Florida residents don't know.

Table 74:
From your perspective, which of the following pari-mutuel facilities should the State of Florida consider?
Florida Residents

	Prohibit % Yes	Reduce % Yes	Expand % Yes	No Change % Yes	DK % Yes
Thoroughbred racing	11.4	6.6	22.6	33.4	25.8
Harness racing	11.4	7.4	17.1	33.3	30.7
Quarter horse racing	11.2	7.2	17.4	33.3	30.9
Greyhound racing	19.1	12.3	12.7	31.8	24.1

Of all Florida Residents (n=1223)

Preferences toward Pari-mutuel Facilities in Florida – Non-Florida Residents

Roughly one-quarter of non-Florida residents believe there should be no change in each of the pari-mutuel facilities in Florida and approximately four-in-ten don't know.

With the exception of Greyhound racing, a slightly greater proportion of non-Florida residents believe that the other forms of pari-mutuel racing should be expanded.

Table 75:
From your perspective, which of the following pari-mutuel facilities should the State of Florida consider?
Non-Florida Residents

	Prohibit % Yes	Reduce % Yes	Expand % Yes	No Change % Yes	DK % Yes
Thoroughbred racing	8.8	8.1	17.3	27.8	38.2
Harness racing	9.6	8.3	13.4	28.0	40.6
Quarter horse racing	9.0	8.2	14.8	28.0	40.0
Greyhound racing	15.8	11.2	10.9	24.3	37.9

Of all non-Florida residents (n=1213)

IMPACT OF EXPANDED DESTINATION CASINO GAMBLING ON FLORIDA

Preferences toward New Destination Casinos - Florida Residents vs. Non-Florida Residents

Almost half of respondents interviewed (48%) believe that Florida should authorize new destination casino resorts.

Florida residents are significantly more likely than their non-Florida counterparts to believe that Florida should authorize new destination casino resorts (57% vs. 39%), while non-Florida residents are significantly more likely than Florida residents to not be in favor of authorizing new destination casino resorts in Florida (43% vs. 20%).

Table 76:
Florida currently has limited large-scale destination casino resorts, should Florida authorize new destination casino resorts?

	Total Sample % Yes (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
Yes	47.9	56.9[a]	38.9
No	19.4	20.3	42.6[a]
Don't Know/Not sure	32.7	22.8	18.5

Of all respondents (n=2436)

a - Denotes a significant difference between Florida residents and Non-residents

Preferences toward New Destination Casinos – Florida Residents by Region

Nearly six-in-ten (58%) South and Central Florida residents and half (49%) of North Florida residents believe that Florida should authorize new destination casino resorts.

Table 77:
Florida currently has limited large-scale destination casino resorts, should Florida authorize new destination casino resorts?
Florida Residents by Region

	North Florida Residents % (n=181)	Central Florida Residents % (n=553)	South Florida Residents % (n=483)
Yes	49.2	58.2	58.4
No	20.4	21.0	19.5
Don't Know/Not sure	30.4	20.8	22.2

Of all Florida respondents (n=1217)

Preferences toward Number of Destination Casino Resorts in Florida

Four in ten (44%) respondents interviewed believe that the State should authorize between 2-3 additional destination casino resorts in Florida.

Of those who agree that the State of Florida should authorize new destination casino resorts, non-Florida residents (46%) are significantly more likely than Florida residents (42%) to believe that 2-3 more should be allowed. Non-Florida residents (32%) are also significantly more likely than Florida residents (29%) to believe that 4-8 more should be allowed.

Florida residents (26%) are significantly more likely than their non-Florida counterparts (19%) to believe that more than 8 new destination casino resorts should be allowed.

Table 78:
Florida currently has limited large-scale destination casino resorts. Should Florida authorize new destination casino resorts? If yes—how many do you believe should be allowed?

	Total Sample % Yes (n=2436)	Florida Residents % (n=1223)	Non-Florida Residents % (n=1213)
1	2.8	2.6	3.2
2-3	43.8	42.2	46.1[a]
4-8	29.9	28.7	31.5[a]
More than 8	23.5	26.4[a]	19.2

Of those who agree the state should authorize new destination casino resorts (n=2436)

a - Denotes a significant difference from Florida residents

Perceived Benefits of Destination Casino Resorts to Florida – All Respondents

More than half of respondents interviewed (56%) believe that expanded gambling would be beneficial to Florida, while three-in-ten are in favor of bringing large-scale destination casino resorts to their town.

Two-in-ten is either not in favor of bringing large-scale destination casino resorts to their town or is in favor of bringing large-scale destination casino resorts to Florida, but don't want one in their city or town.

Table 79:
Which of the following statements would you agree with?

	All Respondents % Yes (n=2436)
Expanding gambling would be beneficial to Florida	55.9
I'm in favor of bringing a large-scale destination casino resort to my town	32.2
I'm not in favor of bringing a large- scale destination casino resort to my town	27.5
I'm in favor of bringing large-scale destination casino resorts to Florida but don't want a large-scale destination casino resort in my city/town	26.1
No opinion	11.1
Reducing gambling would be beneficial to Florida	10.0
I do not agree with any of the above	5.5

Of all Florida Residents (n=2436)

Responses were yes/no

Perceived Benefits of Destination Casino Resorts to Florida – Florida Residents

More than four-in-ten Florida residents (46%) believe that expanded gambling would be beneficial to Florida, while roughly one in three are in favor of bringing large-scale destination casino resorts to their town.

One-in-five Florida residents is either not in favor of bringing large-scale destination casino resorts to their town or is in favor of bringing large-scale destination casino resorts to Florida, but don't want one in their city or town.

Table 80:
Which of the following statements do you agree with?

	Florida Residents % Yes (n=1223)
Expanding gambling would be beneficial to Florida	45.5
I'm in favor of bringing a large-scale destination casino resort to my town	31.2
I'm not in favor of bringing a large- scale destination casino resort to my town	21.7
I'm in favor of bringing large-scale destination casino resorts to Florida but don't want a large-scale destination casino resort in my city/town	21.3
No opinion	16.1
Reducing gambling would be beneficial to Florida	10.6
I do not agree with any of the above	4.5

Of all Florida Residents (n=1223)

Responses were yes/no

Perceived Benefits of Destination Casino Resorts to Florida – Non - Florida Residents

More than six-in-ten non-Florida residents (65%) believe that having large-scale destination casino resorts in Florida would be beneficial to Florida, while one-in-three has no opinion or believe that expanded gambling would be beneficial to the State or they would be in favor of visiting a large-scale destination casino resort in Florida.

Table 80:
With which of the following statements do you agree?*

	Non-Florida Residents % Yes (n=1213)
Having a large-scale destination casino resorts in Florida would be beneficial to Florida	64.8
No opinion	32.7
Expanding gambling would be beneficial to Florida	30.1
I would be in favor of visiting a large-scale destination casino resort in Florida	28.2
I do not agree with any of the above	10.0
Reducing gambling would be beneficial to Florida	9.5

Of all non-Florida residents (n=1213)

**Does not equal 100%. Multiple responses were allowed.*

GAMBLING ADDICTION CHARACTERISTICS

Gambling Addiction Characteristic – Restless, Irritable, Anxious

Less than one-percent of respondents who elected to answer this question reported becoming restless, irritable, or anxious when trying to stop and or cut down on gambling.

Table 81:
During the past 12 months, have you become restless, irritable, or anxious when trying to stop and or cut down on gambling?*

	N	%
Yes	1	0.5
No	*189*	*99.5*

**Of those who answered the question (n=190)*

Gambling Addiction Characteristic – Hiding Gambling Behavior

Approximately one-percent of respondents who elected to answer this question reported having tried to keep their family or friends from knowing how much they have gambled.

Table 82:
During the past 12 months, have you tried to keep your family or friends from knowing how much you gambled?*

	N	%
Yes	2	1.1
No	188	98.9

**Of those who answered the question (n=190)*

Gambling Addiction Characteristic – Financial Trouble

Approximately one-percent of respondents who elected to answer this question reported having such financial trouble as a result of gambling that they had to get help with living expenses from family, friends, or welfare.

Table 83:
During the past 12 months, did you have such financial trouble as a result of gambling that you had to get help with living expenses from family, friends or welfare?*

	N	%
Yes	2	1.1
No	188	98.9

**Of those who answered the question (n=190)*

DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE

Gender

Approximately 52% of the total sample is female.

Table 84:
What is your gender?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-residents of Florida % (n=1213)
Male	47.9	47.3	48.5
Female	52.1	52.7	51.5

Household Income

Slightly more than four-in-ten respondents earn a household income of less than $50,000, roughly one-third earn between $50,000 and $99,999 per year, and approximately one-in-five earn $100,000 or more.

Table 85:
What is your annual income?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-residents of Florida % (n=1213)
Less than $50,000	44.4	45.8	42.9
$50,000 to $99,999	35.7	36.2	35.1
$100,000 to $150,000	13.1	12.3	13.8
$150,000 or more	6.9	5.6	8.1

Marital Status

Nearly half of the total sample is married, one-in-ten is divorced or an unmarried couple living together. Between one-quarter and one-in-three respondents have never been married.

Table 86:
What is marital status?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-residents of Florida % (n=1213)
Married	46.9	47.5	46.4
Separated	1.6	2.0	1.2
Divorced	11.7	12.3	11.1
Widowed	3.0	3.8	2.3
Unmarried couple living together	9.1	9.1	9.0
Never married	27.7	25.3	30.0

Children in the Household

Seven-in-ten respondents does not currently have children in the home.

Table 87:
How many children do you in the home?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-residents of Florida % (n=1213)
Yes	29.6	28.2	31.0
No	70.4	71.8	69.0

Ethnicity

Eight-in-ten survey respondents are of white, non-Hispanic ethnicity. One-in-ten Florida respondents is white, Hispanic, as compared to less than one-in-twenty non-Florida respondents. There is a slightly greater proportion of respondents of Asian ethnicity in the non-Florida sample (7%), as compared to the Florida sample (4%).

Table 88:
What is your race/ethnicity?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-residents of Florida % (n=1213)
White, non-Hispanic	80.6	79.5	81.8
White, Hispanic	6.6	9.5	3.7
Black, non-Hispanic	3.9	4.4	3.4
Black, Hispanic	0.6	0.8	0.3
Native American	0.7	0.6	0.8
Asian	5.5	3.7	7.4
Other	2.1	1.6	2.5

Occupation

More than half of respondents are employed full-time. One-in-ten is employed part-time.

Table 89:
What is your primary occupation?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-residents of Florida % (n=1213)
Employed full-time	52.7	51.3	54.1
Employed part-time	11.1	10.5	11.6
Temporarily unemployed	6.0	6.1	5.8
Homemaker full time	5.3	4.8	5.8
Student full time	6.2	5.6	6.7
Retired	18.7	21.6	15.9

Education

Roughly one-in-three respondents has an education of 1-3 years or 4 years of college. One-quarter has 1 year of graduate school or more.

Table 90:
What was the last educational level you completed?

	Total Sample % (n=2436)	Florida Residents % (n=1223)	Non-residents of Florida % (n=1213)
Less than 4 years of high school	1.3	1.3	1.2
4 years of high school	13.5	14.7	12.3
1-3 years college	29.1	29.9	28.2
4 years college	31.4	29.8	33.1
1 year of graduate school or more	24.8	24.3	25.2

APPENDIX

SPECTRUM GAMING GROUP AND FLORIDA LEGISLATURE
GAMING CONSUMER SURVEY

Survey

[All Respondents] **Demographics**
D1. What is your age? [18+ ONLY]

D2. Are you…?
1. Male
2. Female

D3. What is your annual household income?
1. Less than $50,000
2. $50,000 - $99,999
3. $100,000 - $150,000
4. $150,000 or more

D4. What is your marital status?
1. Married
2. Separated
3. Divorced
4. Widowed
5. Unmarried couple living together
6. Never married

D5. Do you have children in your household?
1. Yes
2. No

D6. What is your zip code? [FIVE DIGITS]

Core Survey Questions

1. [NON RESIDENTS ONLY] Have you visited Florida during the past two years?
   Yes 01
   No 02
   Don't Know 98
   Refused 99

2. [NON RESIDENTS ONLY] How interested are you in visiting Florida during the next year? [5-PT SCALE WHERE 1=”NOT AT ALL INTERESTED” AND 5=”EXTREMELY INTERESTED”]

3. How well does each attribute listed below describe Florida? Your responses should be based on your impressions, whether from personal experience or what you’ve heard/ read from friends, family or in the media. [5-PT SCALE WHERE 1= “DOES NOT DESCRIBE WELL AT ALL” AND 5= “DESCRIBES EXTREMELY WELL” [ROTATE]
   1. Slow-paced lifestyle
   2. Open-minded
   3. Independent
   4. Crowded
   5. Diverse
   6. Family-oriented
   7. Clean
   8. Health and wellness-focused
   9. Interesting
   10. Friendly
   11. Affordable
   12. Popular
   13. Safe
   14. Fun
   15. Beautiful scenery
   16. Liberal
   17. Conservative
   18. Innovative
   19. Hip, cool, contemporary

Next, we would like to ask you some questions related to your attitude, preferences and experience with various kinds of gambling. By gambling, we mean placing a bet on the outcome of a race, betting on a sporting event or at a casino, or playing the lottery - - in which you might win or lose something of value. First, I would like to ask you about some popular activities.

1. Have you ever gambled in your lifetime?
   Yes 01
   No 02
   Don't Know 98
   Refused 99

2. Have you gambled during the past 12 months?
Yes 01
No 02
Don't Know 98
Refused 99

3. [If Q2=1]If yes, about how often did you gamble during the past 12 months?
   Daily (30+ times per month) 01
   Several times a week (6 - 29 times per month) 02
   Several times a month (3 – 5 times per month) 03
   Once a month or less (6 - 12 times per year) 04
   Only a few days all year (1 - 5 times per year) 05
   Not at all in the past 12 months (0 times) 06
   Don't Know 98
   Refused 99

4. How much do you spend gambling in an average year?
   1. ___$_____(rounded to the nearest dollar please)

5. [IF Q2=1] If yes, what types of gambling do you participate in? And how often? (select all that apply) [ROTATE]

Gambling Type	*Daily*	*Several times per week*	*Several times per month*	*Once a month or less*	*Only a few days a year*	*Not at all during the past 12 months*	*Don't Know*
1. Gambling in a Casino							
2. Playing Gaming Machines Outside a Casino such as at a horsetrack, dogtrack, Jai-alai fronton, Internet sweepstakes café etc							
3.Playing the Lottery							
4.Betting on Horse Racing							
5. Betting on Dog Racing							
7. Betting on Jai-Alai							
6.Sports Betting such as on Football, Baseball, Hockey, Soccer, etc (whether legal or not)							
7.Online Gambling							
8.Other Gambling Activities [Anchor]							

6. [IF Q2=1] When you gamble at a casino, what game do you usually play? (ASK OPEN ENDED, CODE INTO CATEGORIES)

Card games such as blackjack or poker 01
Other table games, such as roulette or craps 02
Slot machines 03
Other video games, such as video poker 04
Keno-type games 05
Sports betting 06
Horse or dog race betting 07
Bingo 08
Pull-tabs 09
Other (Specify) 80
Don't Know 98
Refused 99

7. [IF Q2=1] Why do you participate in gambling? (select all that apply) [ROTATE]

	Never	*Sometimes*	*Often*	*Always*
i. For the chance of winning money or prizes				
ii. Because it's fun				
iii. As a hobby or a pastime				
iv. To escape boredom or to fill my time				
v. Because I'm worried about not winning if I don't play				
6. To compete with others (e.g. bookmaker, other gamblers)				
8. Because it's exciting				
9. For the mental challenge or to learn about the game or activity				
10. Because of the sense of achievement when I win				
11. To impress other people				
12. To be sociable				
13. Because it helps when I'm feeling tense				
14. To make money				
15. To relax				
16. Because it's something that I do with my friends or family				
17. Other (Specify) [ANCHOR]				

10. [IF Q2=2] Why don't you participate in gambling?:[ROTATE]
    1. Live too far away
    2. Inconvenient
    3. Not interested
    4. Religious reasons
    5. Moral grounds
    6. Have other things that I would rather spend my time on
    7. Have other things that I would rather spend my money on
    8. Other (specify) [ANCHOR]

11. [If Q1=1] Have you ever gambled in Florida (other than lottery)?
    Yes 01
    No 02
    Don't Know 98
    Refused 99

12. [If Q11=1] Have you gambled in Florida during the past 12 months (other than lottery)?
    Yes 01
    No 02
    Don't Know 98
    Refused 99

13. [If Q11=1] [For those who gambled in Florida]. Where in Florida have you gambled? [ROTATE]

    Indian Casinos (Land Based)
    1. Miccosukee Resort & Gaming
    2. Seminole Casino Big Cypress
    3. Seminole Casino Brighton
    4. Seminole Casino Hollywood
    5. Seminole Casino Coconut Creek
    6. Seminole Casino Immokalee
    7. Seminole Hard Rock Hotel & Casino- Hollywood
    8. Seminole Hard Rock Hotel & Casino- Tampa

    Pari-mutuel Gaming Facilities
    a. Dog Racetracks
        i. bestbet Jacksonville
        ii. Daytona Beach Kennel Club/West Volusia
        iii. Derby Lane
        iv. Ebro Greyhound Park
        v. Flagler Dog Track & Magic City Casino
        vi. Jefferson County Kennel Club
        vii. Mardi Gras Casino/Racetrack
        viii. Melbourne Greyhound Park
        ix. Naples Fort Myers Greyhound
        x. Orange Park Kennel Club
        xi. Palm Beach Kennel Club/P B Greyhound
        xii. Pensacola Greyhound Track
        xiii. Sanford Orlando/Penn Sanford
        xiv. Sarasota Kennel Club
        xv. St. Johns Greyhound Park
        xvi. Tampa Greyhound Track
    b. Horse Racetracks
        i. Calder Casino/Tropical Park
        ii. Gulfstream Park
        iii. Tampa Bay Downs

iv. The Isle at Pompano Park
v. OBS South Marion

c. Jai-Alai Fronton
i. Dania/Summersport Jai Alai
ii. Fort Pierce Jai Alai
iii. Hamilton Jai Alai
iv. Magic City Jai Alai
v. Miami/Summer Jai Alai
vi. Ocala Poker & Jai Alai
vii. Orlando Jai Alai

d. Casino Style Gaming Centers (e.g. internet/sweepstakes cafe)
e. Casino Boats (Day Cruise- Off Shore) _____
f. Other (specify) [ANCHOR] _____
g. Don't know/not sure [MUTUALLY EXCLUSIVE/ANCHOR]

14. [ALL RESPONDENTS] How likely are you to gamble in Florida in the future? [5-PT SCALE WHERE 1="NOT AT ALL LIKELY" AND 5="EXTREMELY LIKELY"]

15. [If Q14=4 or 5](For those who are likely to gamble in Florida in the future]. Where in Florida are you likely to gamble? [ROTATE]
i. Indian Casino
ii. Pari-mutuel Facility
1. Dogtrack
2. Horsetrack
3. Jai-Alai Fronton
iii. Gaming Parlors in Florida (e.g., Internet sweepstakes café)
iv. Internet/sweepstakes cafe
v. Lottery in Florida
vi. Other (specify) [ANCHOR]
vii. Don't know/not sure [MUTUALLY EXCLUSIVE/ANCHOR]

16. [If Q2=1]For those who gambled in past year] If you had to estimate how much money you gambled during the last year, what would be your estimate in dollars _____?
b. How much of that [in percentage] was in the State of Florida? _____

17. [ALL RESPONDENTS] Do you estimate spending the same amount this year in gambling as you did last year?
1. Yes
2. No
3. Don't know/ not sure
4. Refused

18. [ALL RESPONDENTS] How do you feel about gambling in general?
1. I support gambling
2. I support gambling but do not participate
3. I oppose gambling
4. Neutral- neither support or oppose gambling in general
5. No opinion

19. [ALL RESPONDENTS] How do you feel about expanding gambling opportunities in Florida?
    1. I support expanding gambling in Florida
    2. I support expanding gambling in Florida but will not participate
    3. I oppose expanding gambling in Florida
    4. Neutral – neither support or oppose
    5. No opinion

20. [ALL RESPONDENTS] How do you feel about reducing the opportunities to gamble in Florida?
    1. I support reducing the opportunities to gamble in Florida
    2. I support reducing gambling in Florida but will not participate
    3. I oppose to reducing opportunities for gambling in Florida
    4. Neutral – neither support or oppose
    5. No opinion

21. [ALL RESPONDENTS] Which of the following gambling opportunities would you like to see expanded or restricted or reduced in Florida (Check all that apply, Rotate)?

Gambling Type	*Expanded*	*Restricted*	*Reduced*	*No Opinion*	*Don't Know*
Casino Gambling at tribal facilities					
Casino gambling at commercial resorts					
Lottery					
Gambling at internet sweepstakes cafes					
Casino gambling at Horse Racetracks					
Casino gambling at dog racetracks					
Casino Gambling at Jai-alai Frontons					
Sports Betting					
Online Gambling					
Other Gambling Activities [Anchor]					

22. [FOR NON-RESIDENTS WHO COME TO FLORIDA] If Florida <u>expanded</u> gambling opportunities would you come to Florida?
    i. More
    ii. Less
    iii. The Same
    iv. Don't know

23. [FOR NON-RESIDENTS WHO COME TO FLORIDA] If Florida <u>reduced</u> the opportunities for gambling, would you travel to Florida?
    1. More
    2. Less
    3. The Same
    3. Don't know

24. [FOR NON-RESIDENTS WHO DO NOT COME TO FLORIDA] If Florida expanded gambling opportunities would you (then) come to Florida?
    1. Yes
    2. No
    3. Don't know

25. [FOR NON-RESIDENTS WHO DO NOT COME TO FLORIDA] If Florida restricted gambling opportunities would you (then) come to Florida?
    1. Yes
    2. No
    3. Don't know

26. [FOR NON-RESIDENTS WHO DO NOT COME TO FLORIDA] If Florida reduced gambling opportunities would you (then) come to Florida?
    4. Yes
    5. No
    6. Don't know

27. [FOR RESIDENTS OF FLORIDA] If Florida reduced the gambling opportunities in the State, which of the following types of activity / entertainment are you likely to spend more, less, the same?

Activity	*Spend More*	*Spend Less*	*Spend the Sam*	*Don't Know*
1.Shopping				
2.Bars and Restaurants				
3.Shows				
4.Lodging				
5.Conventions or Meetings				
6.Spa / Salon				
7.Nightlife/Clubs				
8.Recreation/ Sports				
9.Casino Gambling				
10. Travel				
Other (Specify)				

28. [ALL RESPONDENTS] How important do you think the gambling industry is in terms of contributing to the overall travel and tourism industry in Florida? [5-PT SCALE WHERE 1="NOT AT ALL IMPORTANT" AND 5="EXTREMELY IMPORTANT']

29. [FOR THOSE WHO RESPONDED "3" IN Question 18] From your perspective, why do you oppose gambling? (select all) [ROTATE]
    1. Crime
    2. Problem gambling
    3. Personal reasons
    4. Religious reasons
    5. Moral grounds
    6. Lost productivity
    7. Am not at all opposed to having casinos [MUTUALLY EXCLUSIVE/ANCHOR]
    8. Other (specify) [ANCHOR]
    9. Don't Know/Not sure [MUTUALLY EXCLUSIVE/ANCHOR]

30. [IF Q19=3] If there were additional restrictions or limits on gambling in Florida, would you be more likely to favor expanding gambling in Florida?
    1. Yes
    2. No
    3. Don't know/ not sure

31. Would you be more likely, equally likely or less likely to visit the following destinations in Florida if more opportunities to gamble were available? [ROTATE]
    1. Orlando
    2. Tampa/St. Pete
    3. Jacksonville
    4. Naples
    5. Miami
    6. Panama City/Fort Walton Beach
    7. Daytona Beach
    8. West Palm Beach
    9. Ft. Lauderdale
    10. Other (specify)
    11. Don't know/not sure

32. Which of the following do you believe would have a more favorable outcome for the State of Florida?
    Expanding Gambling in Florida
    1. Yes
    2. No
    3. Don't know/ not sure

    Reducing Gambling in Florida
    4. Yes
    5. No
    6. Don't know/ not sure

33. Who would benefit from expanding gambling in the State of Florida?

Residents	yes	no
Tourists	yes	no
Not sure/don't know		

34. Who would benefit from reducing gambling in the State of Florida?

Residents	yes	no
Tourists	yes	no
Not sure/don't know		

35. Which of the following benefits does/do you feel gambling (would) offers Florida? (select all that apply) [ROTATE]
    1. Create more jobs in the state/ your community
    2. Attract more investment to the state/your community
    3. Generate more revenue for local and small businesses
    4. Create additional tax revenue for state and local governments
    5. Create a positive impact on the cultural identity of the community
    6. Attract more visitors to the state
    7. There would be no benefit to having destination casino resorts in Florida [MUTUALLY EXCLUSIVE/ANCHOR]
    8. Other (specify) [ANCHOR]
    9. Don't Know/Not sure [MUTUALLY EXCLUSIVE/ANCHOR]

36. From your perspective, should the state **regulate** gambling at
    1. Internet sweepstakes cafes YES/NO/DK
    2. Arcades YES/NO/DK
    3. Truck stops YES/NO/DK

37. Should the State of Florida **prohibit** casino gambling at
    1. Internet sweepstakes cafes YES/NO/DK
    2. Arcades YES/NO/DK
    3. Truck stops YES/NO/DK

38. Should the State of Florida **tax** gambling at
    1. Internet sweepstakes cafes YES/NO/DK
    2. Arcades YES/NO/DK
    3. Truck stops YES/NO/DK

39. If the State of Florida were to reduce the number and operation of slot machines at pari-mutuel facilities in Florida (e.g., at Dog Racetracks, Horse Racetracks, Jai-Alai Frontons)—would you be in favor of this?
    1. Yes
    2. No
    3. Don't know/ not sure

40. if the State of Florida were to authorize pari-mutuel facilities (e.g., Dog Racetracks, Horse Racetracks, Jai-Alai Frontons) to conduct table games would you be in favor of this?
    1. Yes
    2. No
    3. Don't know/ not sure

41. Florida currently has limited large-scale destination casino resorts. Should Florida authorize new destination casino resorts?
    1. Yes--- if yes—how many do you believe should be allowed
       _____
       a. 1
       b. 2-3
       c. 4-8
       d. More than 8
    2. No
    3. Don't know/ not sure

42. [FLORIDA RESIDENTS ONLY] Which of the following statements would you agree with? (select all that apply) [ROTATE]
    1. Expanding gambling would be beneficial to Florida.
    2. Reducing gambling would be beneficial to Florida
    3. I'm in favor of bringing a large-scale destination casino resort to my town.
    4. I'm not in favor of bringing a large-scale destination casino resort to my town.
    5. I'm in favor of bringing large-scale destination casino resorts to Florida but don't want a large-scale destination casino resort in my city/town.
    6. I Do not agree with any of the above [ANCHOR/MUTUALLY EXCLUSIVE]
    7. No opinion [ANCHOR/MUTUALLY EXCLUSIVE]

43. [NON RESIDENTS ONLY] Which of the following statements would you agree with? (select all that apply) [ROTATE]
    1. Expanding gambling would be beneficial to Florida.
    2. Reducing gambling would be beneficial to Florida
    3. Having large-scale destination casino resorts Florida would be beneficial to Florida.
    4. I would be in favor of visiting a large-scale destination casino resort in Florida.
    5. I Do not agree with any of the above [ANCHOR/MUTUALLY EXCLUSIVE]
    6. No opinion [ANCHOR/MUTUALLY EXCLUSIVE]

44. [ALL RESPONDENTS BRANCHING QUESTION FROM Q45] From your perspective, which of the following pari-mutuel facilities should the State of Florida consider to do?

    a.Thoroughbred racing Prohibit/Reduce/Expand/No Change /DK

    b.Harness racing Prohibit/Reduce/Expand/No Change /DK

    c.Quarter horse racing Prohibit/Reduce/Expand/No Change /DK

    d. Greyhound racing Prohibit/Reduce/Expand/No Change /DK

45. [FOR OUT OF STATE VISITORS] If gambling was expanded in the State of Florida, would you choose to stay in Florida for a longer period of time?

    Expanded

    1. Yes --- if yes .. how much longer? _____
    2. No
    3. Don't know

46. [FOR OUT OF STATE VISITORS] If gambling was reduced in the State of Florida, would you choose to stay in Florida for a longer period of time?

    reduced

    4. Yes --- if yes .. how much longer? _____
    5. no
    6. don't know

47. [FOR FLORIDA RESIDENTS] If gambling was expanded in the State of Florida, would you more likely to gamble in the State rather than take a trip outside the State?

    Expanded

    1. Yes
    2. No
    3. Don't know

48. [FOR FLORIDA RESIDENTS] If gambling was reduced in the State of Florida, would you more likely to gamble out of State rather than gamble in the State?

    Expanded

    4. Yes
    5. No
    6. Don't know

50. [For those who gamble] During the past 12 months, have you become restless, irritable, or anxious when trying to stop and (or) cut down on gambling?

    i. Yes
    ii. No

51. [For those who gamble] During the past 12 months, have you tried to keep your family or friends from knowing how much you gambled?

i. Yes
ii. No

52. [For those who gamble] During the past 12 months, did you have such financial trouble as a result of gambling that you had to get help with living expenses from family, friends, or welfare?

Responses:

* Yes

* No

We're almost through! We have just a couple more questions for classification purposes.

D7. Do you consider yourself to be: [ALLOW ONE RESPONSE]
1. White, non-Hispanic
2. White, Hispanic
3. Black, non-Hispanic
4. Black, Hispanic
5. Native American
6. Asian
7. Other

D8. What is your primary occupational status?
1. Employed full-time
2. Employed part-time
3. Temporarily unemployed
4. Homemaker full-time
5. Student full-time
6. Retired

D9. What is the last educational level you completed?
1. Less than 4 years of high school
2. 4 years high school
3. 1-3 years college
4. 4 years college
5. 1 year graduate school or more

D10. How far do you live from a gambling facility?
1. 10 minutes or less
2. 10 minutes to ½ hour
3. About 1 hour
4. 2 hours
5. More than 2 hours away

Lead Investigators

The lead investigators for this Florida Gaming Study are Dr.'s Lori Pennington-Gray and Greg Dunn.

Dr. Lori Pennington-Gray

Dr. Pennington-Gray is an associate professor in the University of Florida's Department of Tourism, Recreation and Sport Management. Dr. Pennington-Gray believes that the tourism industry is the "ambassador for the tourist" and, thus, responsible for informing, directing, and protecting tourists at all times. In alignment, in recent years, she has focused on research in the area of tourism-specific crisis management. Her research initiatives have advanced our understanding of theory, methods, and application for the industry. The contribution and impact of her research is primarily to benefit the destination management organization (DMO). A DMO is the agency responsible for marketing and development of tourism within the destination, which can be at the local, state, or national level. Her research focus is primarily centered on the relationship between the destination management organization and tourists in the context of tourism crisis management. Thus, her research agenda is concentrated on both the supply side (industry) and the demand side (tourists) of tourism crisis management. Specifically, her contributions to the literature have examined tourism crisis preparedness certification (Pennington-Gray, Schroeder, Donohoe, & Wu, 2013) and drivers of social media use in the event of a crisis (Pennington-Gray, Kaplanidou, & Schroeder, 2013; Pennington-Gray & Schroeder, 2013; Schroeder, Pennington-Gray, Donohoe, & Kiousis, 2013). Her research has primarily shown that destinations are not prepared for disasters (Pennington-Gray, Thapa, Kaplanidou, Cahyanto, & McLaughlin, 2011) and that prospective tourists perceive safety as one of the most fundamental criteria for choosing a destination (Pennington-Gray, London, Cahyanto, & Klages, 2011; Pennington-Gray, Schroeder, & Kaplanidou, 2011). Dr. Pennington-Gray has been involved in an number of externally funded projects. She has worked with destination management organizations at the local, state, and national levels. Collectively, Dr. Pennington-Gray's research program has advanced the field's knowledge of tourism crisis management. In particular, her research has extended empirical support for several previously unexplored relationships. Overall, her research findings are tools for managers and policy makers to effectively manage visitors, residents, and destinations.

Dr. Greg Dunn

Dr. Dunn is an assistant professor in Metropolitan State University - Denver's Department of Hospitality, Tourism and Events and a visiting scholar in the University of Florida's Department of Tourism, Recreation and Sport Management. Previously, Dr. Dunn served as executive vice president at MMGY Global (formerly Ypartnership) and a member of the faculty at the University of South Florida. At MMGY, he was responsible for sourcing, composing, managing implementation and interpretation of marketing research and brand strategy while playing an active role in key account leadership and development of client marketing strategy. As an assistant professor, Greg specializes in teaching, research and service in the areas of marketing, marketing research and strategy. Dr. Dunn joined MMGY/Ypartnership and USF after acquiring more than 25 years of experience in various industry disciplines working in both management and marketing positions for respected organizations such as the Sea Island Company, The Boca Raton Resort and Club, The Greenbrier, Radisson, Sea Palms Resort, the Walt Disney Company® and Norwegian Cruise Lines. His background includes contracting and leadership of a diverse range of research and strategy projects for top hospitality, gaming and tourism clients such as Disney Parks & Resorts, WMS Gaming, Delaware North Company, Preferred Hotel Group, Interval International, Spectrum Gaming, U.S. Travel, Destination Hotels & Resorts and tourism and gaming boards such as Russia, Honduras, Bahamas, Curacao, Aruba, Barbados, Italy, Thailand, Mexico, Dominican Republic, Canada, Florida, New Hampshire, Connecticut, Oklahoma, Hawaii, Oregon, Savannah, Denver, New Orleans, Orlando, Napa Valley and Miami. Dr. Dunn has also been the co-author of the MMGY/Harrison Group Portrait of American Travelers, WMS Gaming/Ypartnership Active Gambler Profile, MMGY/U.S. Travel Association Travelhorizons, Ypartnership/Yankelovich Partners National Travel Monitor and the Ypartnership Portrait of Affluent Travelers series and has published numerous articles in the areas of marketing and strategy in both academic and professional journals such as the Journal of Travel and Tourism Marketing, UNLV Gaming Research & Review Journal, Hotel and Motel Management and Casino Management.