

COMPREHENSIVE ANALYSIS:

Projecting and Preparing for Potential Impact of Expanded Gaming on Commonwealth of Massachusetts

Prepared for the Commonwealth of Massachusetts,
Deval L. Patrick, Governor
Timothy P. Murray, Lieutenant Governor
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1201 New Road, Suite 308
Linwood, NJ 08221 USA
609.926.5100
www.spectrumgaming.com

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Executive Summary

The Commonwealth of Massachusetts engaged Spectrum Gaming Group, an independent research and professional services firm, to analyze a legislative proposal to authorize three commercial destination casino resorts in the state, and to project its potential impacts.¹

Four core themes resound throughout our analysis that would help ensure that gaming advances public policy in Massachusetts:

1. Public policy should be designed to maximize capital investment, a critical element that separates successful gaming markets from less-successful ones.
2. A robust, comprehensive bidding process should be established to attract the highest quality applicants and to ensure that such applicants develop policies that inure to the best interests of the Commonwealth.
3. Casino licensure, as envisioned in this legislation, is tantamount to a regional monopoly. We suggest that it should require a concomitant responsibility on the part of each licensee to operate in the public interest.
4. The interests of all stakeholders – from operators and investors, to patrons, small business owners and taxpayers – should be parallel. This means that policies and practices must be designed to ensure that all interested parties benefit, and that no interests are sacrificed.

A vigorous licensing process designed to evaluate bids based on how applicants intend to advance the public interest on a variety of fronts is required to ensure the development of a gaming industry that operates in the best interests of Massachusetts.

Many impacts can be expected that can be characterized as related to general economic trends, or that would occur in any industry that targets consumer spending – including the prospect of enhanced competition among private businesses. With that in mind, we caution that there can be no guarantees from the Commonwealth or from casinos that all impacts will be positive. The public and private sectors must maintain realistic expectations, and guide public policy where it can be guided.

Based on our research, analysis and experience, Spectrum reached the following conclusions:

Economic Impact

- Three destination casinos in Massachusetts could generate between \$1.23 billion and \$1.78 billion in annual gross gaming revenue in their first year of stabilized operations. The likely projection is \$1.5 billion in annual gaming revenue. The following table provides a range of revenue projections for one casino in each of the three regions:

¹ Our assumptions for each potential property include the following: 160,000 square-foot casino; 3,000 slot machines; 180 live table games (120 traditional, 60 poker); 2,000-room hotel; 100,000 square feet of convention/meeting/event space; \$1 billion in actual construction costs.

Total est. gross gaming revenue (in millions)

	Region 1	Region 2	Region 3	Total
Low case	\$452.3	\$438.1	\$ 336.4	\$ 1,226.8
Moderate case	\$542.1	\$526.8	\$ 432.7	\$ 1,501.6
High case	\$643.4	\$623.4	\$ 509.7	\$ 1,776.5

- The casinos would each create an average of 4,377 direct jobs.
- Every direct job in the casino industry would yield approximately 0.5 jobs elsewhere in the local economy. The statewide employment impact of this industry would be a total of 20,000 jobs throughout Massachusetts.
- Turnover at the Massachusetts casinos would be about 25 percent, which translates into approximately 1,100 job openings annually at each casino. These will be disproportionately greater in certain job categories, such as unskilled, entry-level positions, where the turnover rate could reach as high as 40 percent.
- The Massachusetts casinos in our moderate-case, or likely, scenario would add about \$1 billion to the gross regional product of the Boston area and \$2 billion to the gross regional product of Massachusetts.
- This moderate scenario shows that \$596.7 million in total government revenue – including indirect revenue -- would be generated, including funds that would be available for property tax relief. This amounts to 39.7 percent of projected gaming revenue.
- Each Massachusetts casino would create an estimated 3,000 direct construction jobs.
- Total annual salaries and wages would be \$121 million for a Boston casino and \$119.6 million for each of the two casinos in the eastern and western regions of Massachusetts. With benefits, total compensation would be \$157.3 million for Boston and \$155.5 million for each of the other two properties. This represents more than \$468 million in annual direct compensation in Massachusetts with three casino properties. With benefits, the average compensation level for casino workers in Massachusetts would be \$35,641. Without benefits, the average is \$27,417.
- Lottery sales in counties near the three destination casinos in Massachusetts would decline, at least in the short term. Long-term, our view is that the Lottery will not be significantly affected by the introduction of casinos in Massachusetts, particularly with the development of cross-marketing plans and other strategies designed to protect the Lottery.
- Conventions and meetings at a destination casino would generate at least \$7.2 million in annual spending at other area businesses, and also would create annual demand for more than 26,000 room nights at other lodging facilities.
- The potential for substitution away from existing entertainment, bars, restaurants, hotels and other businesses can be addressed through effective public policy. The impact of casinos on other businesses – whether a substitution or complementary

effect – is likely to be felt within a relatively short distance of the casinos. Without knowing where the three Massachusetts casinos would be located, we cannot project the specific local impacts on businesses. Any adverse effects casinos may have on other industries could be significantly mitigated if the locations for the casinos are chosen wisely, with an eye for strategic placement, and if applicants for licensure affirmatively address this issue in their competitive bids.

- The agencies regulating Massachusetts casinos would have a projected combined annual budget of about \$16.1 million, with most of that funding coming from the gaming operators.
- Legalizing commercial casinos could open the door to Indian tribes to also offer Class III (Las Vegas-style) gambling. However, such casinos would require tribal-state compacts, over which the Commonwealth would have significant negotiation power. Tribes could offer Class II (bingo-based) gaming without a tribal-state compact. Although a Class II tribal casino would represent competition to commercial casinos in the state, a Class III facility would pose much more of a threat.
- Unless and until the open question of a potential tribal casino in Massachusetts is resolved, that uncertainty will be perceived by capital markets and commercial operators as a heightened risk. Added risk would be reflected in a higher cost of capital – i.e., sources of capital will demand greater returns to compensate for the increased risk. This would result in less capital being invested, which would lead to fewer jobs, less gaming revenue and less overall benefit to the Commonwealth.

Social Impacts

- The social impacts of casino gambling are significantly more difficult to objectively analyze and estimate. We concur with the conclusion of prominent problem-gambling epidemiologist Dr. Rachel Volberg: “The negative impacts of gambling [which chiefly concern the social impacts] typically take much longer to emerge than the positive impacts and they’re also often much harder to measure in terms of quantitative and economic terms.”
- Massachusetts likely would have the largest budget among all casino states that could fund problem gambling programs. Existing programs in Massachusetts presently treat problem gamblers who visit out-of-state casinos. These out-of-state casinos presently contribute no funding for such Massachusetts programs.
- While treatment for problem gambling would be funded from state revenue, the casino licensees should have primary responsibility to develop comprehensive “responsible gaming” policies to address this issue. Such plans should be viewed as a critical element in evaluating competitive bids.
- Destination casinos – because they will drive high levels of visitation – will have a significant impact on the demand for law enforcement and related services. For example, a significant increase in driving under the influence (DUI) arrests should be expected. Local law enforcement agencies – particularly in rural areas – could face serious demands for their services, which must be anticipated.

- Casinos located near high-volume highways that have adequate access can cause less disruption to the host and surrounding communities; casinos nestled among towns, farther from high-volume highways, can potentially fuel considerable disruption in terms of traffic, quality of life, and maintenance costs.

Casino Visitation

- Destination casinos collectively would generate an average of between 18,000 and 27,000 visits per day.
- Three Massachusetts destination casinos would draw between 43 percent and 65 percent of all Massachusetts gaming trips and spending, or between \$572 million and \$864 million annually.
- Massachusetts residents have been spending an estimated \$1.1 billion annually on gaming alone in Connecticut and Rhode Island. Massachusetts casinos could recapture about \$500 million to \$700 million of that annual total.
- Complementing such recaptured spending, Massachusetts would see the importation of new gaming revenues from neighboring states ranging from about \$650 million to \$900 million. Overall spending on casino gambling by Massachusetts residents would increase by \$125 million to \$150 million over present levels.
- Casinos can complement existing attractions, add perceived value to tourists and business travelers who are considering Massachusetts as a destination, and help attract incremental capital investment for the tourism industry.

Recommendations

The public sector in Massachusetts has broad discretion and powerful leverage at the outset to ensure that the successful bidder takes whatever steps are necessary to advance the public interest on a wide variety of fronts. Such leverage would be at its zenith during the bidding phase, in which applicants would recognize that they must compete against each other in their zeal and in their creativity in developing strategies to advance the public interest. Once licenses are issued, and casinos are operational, we caution that such leverage would largely disappear.

Using that leverage to require that all bidders submit comprehensive, credible plans that are in congruence with public policies can be justified by the proposed legislation, which essentially creates up to three regional monopolies. No other private businesses that target consumer discretionary spending, from hotels to restaurants, could reasonably expect that Massachusetts would protect them from potential in-state competition. Our core recommendation is to develop a robust bidding process designed to ensure that all applicants develop financial, marketing and other plans that fully operate in the public interest. To that end, all applicants must develop comprehensive plans that address a variety of concerns and policies, including:

- Protecting the Lottery.

- Targeting conventions and meetings to increase overnight visitation and increase utilization of existing convention facilities.
- Developing cross-marketing plans with other local businesses.
- Training local workers.
- Promoting tourism.
- Addressing problem gambling.
- The selection process must be developed and guided by appointed officials who possess the political ability and independence to establish rigorous standards in a variety of areas. Such officials must be vested with the ability – and willingness – to weigh applications and, if necessary, deny any and all applications, should such applications fall short of these standards.
- The Commonwealth must maintain the highest possible degree of independence from fiscal pressure to help ensure the highest-quality facilities that operate in the public interest. Fiscal pressures could enhance the appeal of proposals to allow for the relatively quick installation of slots at racetracks or other facilities, operating under a higher tax rate, but such facilities would likely have different business models than destination casinos, and would thus be less likely to advance the same public policies. Visitors to well-capitalized destinations – as opposed to, say, smaller, under-capitalized properties that target convenience-driven, local adults – will likely stay longer and spend more. The greater the level of capitalization, the less vulnerable a gaming industry would be to competition from the expansion or introduction of gaming in other states.
- The Commonwealth should use a staggered bidding process, focusing on Region 1 as the first license to be awarded. This would allow stronger bidders that are not successful in one region to pursue plans in another. It would also allow the most efficient operators – who would be more likely to build properties that would further public policy – more than one opportunity to participate in Massachusetts gaming. The drawback of a staggered process is that it could significantly add to the length of time in which the Commonwealth would not be realizing anticipated revenue. This could be ameliorated, however, by allowing operators to build temporary facilities.
- Regulators should be wary of any bids that attempt to win licensure by promoting higher rates beyond the 27 percent minimum. Higher rates – while they might be tempting as a means of addressing near-term budget shortfalls – would likely result in less investment, fewer jobs and potentially less overall gaming revenue in the long term. Even at a 27 percent tax rate, Massachusetts casinos would be at a material disadvantage against their most direct competitors in Connecticut, as well as against some more distant competitors in New Jersey and elsewhere.

The Commonwealth must protect the Lottery by using multiple tools:

- All bids for any future casino destinations in Massachusetts should include plans designed to minimize any negative impact on the lottery.

- The casinos should assume financial responsibility for protecting the lottery against any adverse impact from the new casino competition.
 - Require casinos to develop plans to increase ticket sales to out-of-state residents.
 - Require casino operators to develop and follow through on cross-marketing strategies with the lottery.
 - At least one of the two gubernatorial appointees to the Massachusetts State Lottery Commission should be a representative of the casino industry to help coordinate all efforts to grow lottery revenues.
 - Reconsider the proposed 3 percent guaranteed long-term growth rate, as it is perhaps too ambitious for a lottery that has proven to be so successful. (The lottery's success will make it increasingly difficult to achieve such growth over time, requiring higher per capita spending from adults who already are spending more on lottery tickets than their counterparts in other states.) Rather, we suggest that the Legislature consider a lower target growth rate, yet require applicants for casino licensure to develop plans designed to achieve that 3 percent growth rate.
- Casino applicants should be weighed, in part, on how they intend to develop cross-marketing arrangements with appropriate nearby businesses. Such arrangements must recognize, and serve the interests of both the casino and the outside business.
 - Any Indian casino should, ideally, be one of the three state-issued commercial licenses. An Indian casino that operates outside of the Massachusetts regulatory system could potentially generate no gaming-tax revenue to the Commonwealth and would likely cause a significant decline in the gross gaming revenues of one or more of the commercial casinos. Any compact negotiated by the state should seek to ensure a level playing field – notably with respect to the tax on gross gaming revenue – among all gaming operators.
 - Massachusetts should adopt an efficient but relatively strict approach to the regulation of its gaming industry at the start to ensure the public's trust. This regulatory scheme should:
 - Create regulations for the control of the assets that thoroughly address rules for table games and controls for slot machines.
 - Include a visible presence on the casino floor and be accessible to the public and casino employees.
 - Create a licensing structure that addresses all those that participate in the gaming industry, including operators, employees and vendors.
 - Create an investigative agency that is independent of the regulatory agency.
 - Destination casinos must be fully integrated into the tourism industry. Any casinos developed in Massachusetts must coordinate their marketing efforts closely with existing tourism programs, both at the local and state levels. Such programs should be

designed to increase the frequency and length of visitation and expand the visitor base.

- The Commonwealth must be sufficiently flexible when considering mitigation funding for communities. The number of communities potentially impacted by casinos cannot be ascertained in advance of knowing the location, project scope, ease of access or other factors for any of the three destination resorts. Therefore, we suggest that the bidding process should require all applicants to take a broad view when defining their local community. This includes the following provisions:
 - Applicants for licensure must demonstrate they would minimize the negative impacts, to ensure that mitigation funding stays within the proscribed 2.5 percent limit. Such steps would require the applicants to bear the burden of proof that they have selected an optimal location that offers sufficient access to both patrons and employees, and that the property is pursuing marketing and other strategies designed to minimize such impacts.
 - Law-enforcement responsibilities on the casino floor should be handled at the state level, with minimal demands on local law enforcement. This should include the cost of handling any prosecution of crimes on the casino floor, as is done in other states.
 - The public sector must recognize that not all types of communities will be impacted in the same way, so a one-size-fits-all funding formula might not prove effective once casinos are operational.
 - Given that resource allocation and political representation in Massachusetts are based on population measures, visitation must be taken into account when allocating resources for casino mitigation purposes, particularly when it comes to funding law enforcement.
- Each casino applicant should compensate the Commonwealth or the impacted area for a preliminary impact study of that area. The successful applicant would then be required to compensate the Commonwealth or the impacted area for an updated study every five years, or other appropriate interval.
- Casinos should be sited in areas that provide easy access for its workforce. Such access should be an important criterion in weighing any application.
- The Commonwealth should expand its workforce development efforts to address the vital needs of the unemployed and underemployed as well as people on welfare. The public interest would be best served through private/public partnerships designed to provide basic skills and workplace training to those who need it the most. Additionally, the gaming industry's efforts to help lower-skilled, entry-level workers become part of the Massachusetts labor force will help instill public confidence in casino gaming. The Massachusetts Casino Workforce Development Partnership (CWDP) program could utilize the existing structure of the Massachusetts Workforce Development System.

About this Report

Spectrum Gaming Group was engaged on February 19, 2008, by the Commonwealth of Massachusetts – namely the Executive Office of Housing and Economic Development, the Department of Business & Technology, the Office of Business Development and the Massachusetts Office of Travel and Tourism – to provide “comprehensive and comprehensible analysis that includes a variety of questions that interested parties may have in connection with the Governor’s proposed resort casinos initiative.”

About Spectrum

Spectrum Gaming Group (“Spectrum” or “we”), founded in 1993, is an independent research and professional services firm serving public- and private-sector clients worldwide. Our principals have backgrounds in gaming operations, economic analysis, law enforcement, due diligence, gaming regulation, compliance and journalism.

Spectrum holds no beneficial interest in any casino operating companies or gaming equipment manufacturers or suppliers. We employ only senior-level executives and associates who have earned reputations for honesty, integrity and the highest standards of professional conduct. Our work is never influenced by the interests of past or potentially future clients.

Each Spectrum project is customized to our client’s specific requirements and developed from the ground up. Our findings, conclusions and recommendations are based solely on our research, analysis and experience. Our mandate is not to tell clients what they want to hear; we tell them what they need to know. We will not accept, and have never accepted, engagements that seek a preferred result.

Among our most recent public-sector clients are Broward County (FL), West Virginia Lottery Commission, the New Jersey Casino Reinvestment Development Authority, the Atlantic City Convention and Visitors Authority, the Singapore Ministry of Home Affairs, Rostov Oblast (Russia), and the Puerto Rico Tourism Company. Recent private-sector clients include Bear Stearns, Casino Association of New Jersey, Harrah’s Entertainment, Morgan Stanley, Pokagon Band of Potawatomi Indians, and the Seneca Nation of Indians.

We maintain a network of leading experts in all disciplines relating to the gaming industry, and we do this through our offices in Atlantic City, Bangkok, Guangzhou, Harrisburg, Hong Kong, Las Vegas, Macau, Manila and Tokyo.

We have performed economic-impact analyses in markets ranging from Atlantic City and Philadelphia, to Guam, Louisiana, Connecticut and South Korea.

Methodology

Certain principles guided Spectrum throughout this study:

- We must listen to a wide variety of interests, regardless of their stated or potential position on the issue of legalized casino gambling.
- Our role in all such meetings is to understand the concerns of others, and be respectful of their views. We did not approach any of the meetings held in Massachusetts with an eye toward engaging others in debate, nor did we intend to be persuasive.
- We strive, wherever possible, to be aware of local sensibilities. In practice, that means that our analysis cannot adopt an off-the-shelf approach, in which models and examples from other markets are automatically inserted. At the same time, however, we recognize that any state seeking to legalize casinos must look to existing gaming states and nations for examples. Those two goals must be balanced by identifying the best possible examples, and endeavoring to identify where such examples might potentially fall short.

Spectrum does not advance any pro- or anti-gaming viewpoint, which means that we cannot downplay or ignore examples, arguments or evidence that might contain either positive or negative implications. Indeed, we have an obligation to clearly identify such examples and arguments.

We attended legislative hearings held on the subject, and gleaned important insights from the variety of testimony offered. We listened to the committee members and co-chairs, and the report aims to reflect their concerns as well. Rep. Daniel Bosley of North Adams, who co-chairs the Joint Economic Development Committee, raised issues and asked questions during a March 13, 2008, hearing of that committee that we found to be insightful and helpful. For example, Bosley noted that many of the studies released to date cite each other, and hence support each other's conclusions in what could arguably be a circular path that fails to consider new evidence that could prove either supportive or contradictory. Spectrum shares that concern, and we have made efforts to uncover new evidence and independent, credible studies and surveys.

Spectrum professionals and consultants have made numerous visits to Massachusetts during this research, and have interviewed approximately 40 individuals. Thanks to our subcontractor, Boston-based Beatrix Research & Consulting, we have enhanced our visits with a full-time presence during the course of this research. Additionally, we have interviewed public officials and private industry executives in other jurisdictions as well in the course of this analysis. The following table lists the public and private agencies, organizations and elected officials we have met with. We are grateful for their time and support, and we note that many of these organizations provided access to numerous individuals, some of whom granted us multiple interviews over time as new questions arose.

Elected Officials. Appointed Officials. Government Agencies
Administrator James Malloy, Sturbridge
Boston Redevelopment Authority
City Manager Jay Ash, Chelsea

Commissioner Ed Davis, Boston Police Department
Massachusetts Lottery Commission
Mavor Thomas Ambrosino, Revere
Mavor Michael Bissonnette, Chicopee
Mayor Charles Crowley, Taunton
Mavor Joseph Curtatone, Somerville
Mavor James Harrington, Brockton
Mavor Clare Higgins, Northampton
Mavor Thomas Menino, Boston
Rep. Thomas Conroy, Lincoln, Sudbury and Wayland
Rep. Amy Grant, Beverly
Sen. Anthony Petrucci, First Suffolk and Middlesex Counties
Sen. Stanley Rosenberg, Hampshire and Franklin Counties
Selectmen Edward Harrison and Kathleen Conley Norbut, Monson
Organizations
Environmental League of Massachusetts
Fire Chiefs' Association of Massachusetts
Greater Boston Chamber of Commerce
Greater Boston Convention and Visitors Bureau
Major Cities Chiefs Association
Massachusetts Council on Compulsive Gambling
Massachusetts District Attorneys Association
Massachusetts Lodging Association
Massachusetts Municipal Association
Massachusetts Public Health Association
Massachusetts Restaurant Association
Massachusetts Society for the Prevention of Cruelty to Children
Massachusetts Taxpayers Foundation
Western Massachusetts Casino Task Force

We note that not all the individuals and organizations that we sought out in our research elected to meet with us.

In developing the various estimates and projections found in this report, Spectrum's standard approach is to be conservative, comprehensive and transparent. We recognize that in doing so, some of our estimates will fall short of others. However, we believe that such a methodology – which is explained in each appropriate section of the report – is more useful in helping public and private leaders develop plans and strategies.

As noted throughout the report, we have learned over the decades that impact studies are not static, in that the impacts will vary in response to public policies and private investment. Wherever appropriate, this report identifies areas that could be impacted by such policies, and we make recommendations that we believe could help the Commonwealth and its leadership gain the maximum benefit from our experience and research.

Our effort throughout this report has been to put all the issues in the appropriate context. Readers of this analysis have a responsibility to do likewise. This is particularly critical in areas ranging from crime to personal bankruptcy to impacts on local businesses, along with others. Statistics and anecdotes that are not viewed in the proper context are at serious risk of being misinterpreted.

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 often been asked 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.”²

U.S. Supreme Court Justice Stephen G. Breyer wrote a dissenting opinion in a recent 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. “As students of elementary logic know, *after* it does not mean *because* of it.”³

In the context of understanding the potential impact of casinos, the wisdom of both Byrne and Breyer should be heeded. Complex issues often defy efforts to impose simple cause-and-effect relationships.

In that vein, another issue that is prone to varying interpretations is the national economic downturn that is taking place as this report nears completion. As noted in more detail later, the gaming industry is not immune to economic cycles. The current downturn – fueled by a combination of declining home values, rising commodity prices and an end to easy credit for homeowners – is proving to be particularly painful for casinos.

The issue as it relates to Massachusetts was encapsulated well in a comprehensive article by Steve Decosta of the New Bedford *Standard-Times*, whose research included numerous interviews with experts on the issue. He wrote:

“The realization — after years of steady, healthy gains — that the gaming industry isn't immune to the distress of a troubled economy couldn't have come at a worse time for Massachusetts.

“‘It's ugly,’ Andrew Zarnett, gambling analyst with Deutsche Bank AG of New York, said of the revenue losses and declining stock prices that have thrown the industry for a loop. “‘There's an overall uncertainty in the economy and gaming is feeling the impact. It's really bad.’”⁴

The current climate can lead to assumptions that would likely prove false in the long-term, including:

- The gaming market is already saturated.

² Byrne, a popular speaker known for his wit, has used that example many times, most recently at a dinner in Atlantic City held on November 28, 2007.

³ “Gun Laws and Crime: A Complex Relationship,” by Adam Liptak, *New York Times*, June 29, 2008

⁴ “Gambling revenue declines across U.S.,” by Steve Decosta, *Standard-Times*, July 27, 2008

- Destination resorts, as envisioned by the proposed legislation, would not perform as well as high-tax, convenience-based slot parlors that are less likely to be whipsawed by economic cycles.

As the report notes in detail in various sections, destination casinos draw from a broader geographic area and a wider demographic market than locals-oriented properties. By definition, the broader the market, the more likely it is to reflect the economy as a whole. In our experience, that does not support the argument that high-tax properties that require less capital investment would better serve the public interest.

The ability of slots-only casinos in Pennsylvania and New York to weather the downturn must be understood in context. Destination casinos in the same locations would perform just as well in economic downturns – i.e., visitors would be just as inclined to visit a convenient destination casino as they would another property at the same location – but would clearly outperform over the long-term. At the same time, destination casinos would spend more on goods and services, employ more people and be less vulnerable to external competition.

The critical point here is that elected officials and other policy-makers in Massachusetts must look beyond current economic conditions when establishing policies that will have economic and social ramifications that would extend for decades.

Personnel

The following Spectrum executives and associates contributed to this report:

- Jane Bokunewicz, MBA, Instructor, Goodwin College of Professional Studies, Drexel University, former Vice President of Administration, Tropicana Casino Resort
- John Bowman, Spectrum Associate, former Manager of Employee Licensing, New Jersey Casino Control Commission
- Randi Cohen, PhD., Principal, Beatrix LLC
- Michael Diamond, Vice President – Research, Spectrum Gaming Group
- Fredric Gushin, JD, Managing Director, Spectrum Gaming Group, former Assistant Attorney General and Assistant Director, New Jersey Division of Gaming Enforcement
- Cathy Hsu, PhD., Professor, Hong Kong Polytechnic Institute, editor and chapter author of the book, “Legalized Casino Gaming in the US: The Economic and Social Impact”
- Maritza Jauregui, PhD., Associate Professor of Public Health, Richard Stockton College
- Howard Kyle, Masters in Public Policy, Chief of Staff, Atlantic County, NJ
- Bill LaPenta, Director of Financial Analysis, Spectrum Gaming Group
- Tina Ercole LoBiondo, MBA, Vice President – Analysis, Spectrum Gaming Group
- Anthony Marino, MA, former Deputy Director, New Jersey Expressway Authority

- Wayne Marlin, Spectrum Associate, former Legislative Liaison to New Jersey Department of Labor and New Jersey Division of Gaming Enforcement
- Dominic Modicamore, Senior Research Associate / Economist, Boston Redevelopment Authority
- Harvey Perkins, Senior Vice President, Spectrum Gaming Group
- Michael Pollock, MBA, Managing Director, Spectrum Gaming Group, former Director of Communications, New Jersey Casino Control Commission
- Thomas Sykes, AIA, SOSH Architects
- Richard Teng, CPA, Spectrum Associate, former auditor, Nevada Gaming Control Board
- Douglas Walker, PhD., Associate Professor of Economics, College of Charleston
- Joseph Weinert, Senior Vice President, Spectrum Gaming Group
- Arnold Wexler, Arnie & Sheila Wexler Associates, former executive director of the New Jersey Council on Compulsive Gambling

Introduction: Listening to Stakeholders

Spectrum Gaming Group LLC (Spectrum) has analyzed and observed the evolution of the gaming industry around the world for three decades. Spectrum is neither an advocate nor an opponent of legalized gaming and has always taken an independent approach to these issues, recognizing the need to analyze all markets based on the individual goals, assets and policies within each region. This analysis is built on certain factors that must be present in order for gaming to be successful for its investors, for its local community, and for the entire Commonwealth.

In studying the potential impact of three gaming destination resorts in the Commonwealth of Massachusetts, we have applied certain principles that we have developed from observing and analyzing the evolution of gaming as public policy.

- Gaming must attract significant capital investment. This means that a casino property cannot function with a minimal level of amenities or attractions.
- The statutory and regulatory structure must be developed so that the private sector would identify an opportunity to realize an attractive return on investment.
- The casino should endeavor to attract visitors from outside the local area or region. These visitors should possess a combination of important attributes, chiefly affluence and available time.
- The casino should only be one among many attractions. While it might be the most important offering on a diversified menu, it cannot function effectively if it is the only “cash register” in a property.
- The tax rate must be reasonable and competitive with other gaming markets around the world. The casino industry is global, and capital markets can transfer funds instantly around the world. Taxes are an integral element in determining potential returns on investment, and thus must be set at levels that can attract investment and optimize the benefits to the public.
- Regulation must be comprehensive and transparent. Effective regulation need not be onerous. It simply means that the rules are clear, fixed and understandable. Effective regulation also breeds confidence among investors and the public.
- Casinos must be fully and uniformly integrated into the tourism and hospitality industries. A casino can be an engine that can encourage Massachusetts adults who now spend money outside the Commonwealth to redirect some of that spending at home. It can also help spur convention business, while assisting in efforts to attract visitors from other states and foreign travelers as well.
- Gaming must be governed by rules and policies that pay strict attention to minimizing problems, such as pathological gambling. Indeed, gaming works best – for both the industry and for the public sector – when it is led by operators who adopt clear policies related to responsible gaming.

- Gaming around the world is evolving into mainstream entertainment, allowing resorts that feature casinos to attract a variety of affluent adults beyond those who would be characterized as “gaming-centric.” This trend means that all destinations effectively compete against each other for investors and visitors. With that in mind, resorts that feature gaming have advantages in both a lower cost of capital, and in pricing their other amenities.

Those are the ingredients for success. Clearly, they are all necessary and mutually supportive. When policies are established that keep these principles in mind, several potential goals will be advanced. These include:

- **Optimizing tax revenue.** Tax revenue is not measured simply by the tax on gaming revenue, but must take into account all forms of spending that help generate taxes.
- **Optimizing employment.** A full-service destination resort that has a wide array of attractions will employ more people, and attract more spending to the local area.
- **Addressing problem gambling.** This is an area that requires a significant coordinated effort, as an increase in pathological gambling can fuel increased problems in other areas, from white-collar crime to bankruptcy rates.
- **Ensuring a competitive tourist industry.** As we have seen around the world, no gaming market can claim a monopoly for long. Even though the Commonwealth would grant up to three regional monopolies under the proposed legislation, Massachusetts lawmakers and business leaders will have no control and little influence over what occurs in neighboring states and beyond. The expansion of states, nations and regions that offer gaming will continue unabated. The only way to ensure that a region remains competitive is to attract a sufficient level of capital investment that will make a destination attractive to multiple demographic and geographic market segments.

A common element and theme that resounds throughout our analysis is the attraction of capital investment. That is the element that separates successful gaming markets from less-successful ones, and is the element that will help advance all of the identified public policies. Note that the sections of this report that focus on projecting revenues and profitability show a clear correlation between the level of capital investment and such measures.

This essentially gives the Commonwealth an abiding interest in maximizing capital investment, since better capitalized properties offer certain inherent advantages:

- They are more likely to generate greater revenue since they would appeal to a much broader demographic, and would reach a greater geographic distance.
- Visitors to well-capitalized destinations – as opposed to, say, smaller, under-capitalized properties that target convenience-driven, local adults – will likely stay longer and spend more.
- Well-capitalized destinations will be better positioned to target affluent adults, thus reducing or eliminating any risk that a casino would focus on lower-income adults who could least afford to gamble.

- The greater the level of capitalization, the less vulnerable a gaming industry would be to competition from the expansion or introduction of gaming in other states.

A second, related theme that permeates our analysis is: The interests of all stakeholders should be parallel. This means that policies and practices must be designed to ensure that all interested parties benefit, and that no interests are sacrificed. The concept of mutual benefit is not only attainable, but is necessary. When the private sector, including casino operators, seeks to maximize profit and return on investment, it cannot be at the expense of the public, nor can such efforts sacrifice the local or regional interest. Conversely, public policies must be conceived with the goal of maximizing capital investment without creating or exacerbating social or economic problems. Policies that do not seek to strike a balance and do not advance all interests will ultimately advance none.

Spectrum also points out some necessary caveats that must be taken into consideration by policymakers that we have gleaned from our experience:

- No two gaming markets can expect the same experience, nor should they be guided by the same public policies. Regions vary in multiple ways, from their population density to their employment, to their ease of access and to the level of existing tourism infrastructure within a region. Consequently, results will differ and gaming policy should differ as well.
- The role of the public sector – including the executive and legislative branches at all levels – does not end with the legalization of gaming or the creation of a regulatory body. Indeed, effective public policy mandates that the difficult tasks are just beginning at that point.
- To help ensure that the beneficial effects are targeted to where they are needed most, and to help ensure that the harmful effects are minimized, the private sector – including, but not limited to the casino industry – cannot be fully left to its own devices, but must be guided by sufficient incentives and mandates as necessary.

An example of an incentive would be legislation that allows developers tax incentives to build non-gaming attractions that dovetail with the needs of the tourism industry. New Jersey developed such an incentive in 2004 with legislation that allowed casino operators to retain a portion of state taxes generated on site to offset the cost of constructing approved retail/entertainment districts.⁵ We are not suggesting in this analysis that such an incentive would necessarily be appropriate for Massachusetts. We simply point it out for illustrative purposes.

The public sector may be called on to invest additional resources, both financial and human, to best capture the beneficial effects. For instance, the siting of a casino must take into account a variety of factors that would advance public policy, minimize disruption and optimize the return on investment to the operators, including:

- Will casino traffic disrupt local neighborhoods, or exacerbate existing blockages?
- Will the pool of available labor have access to affordable, convenient transportation?

⁵ The legislation is known as Gormley-James, after its principal sponsors, former New Jersey state Senators William Gormley and Sharpe James.

- Will gaming complement existing businesses and attractions?

In developing this analysis, Spectrum is focusing largely on potential impacts that are gaming-related in the sense that they can be attributable to some unique aspects of casinos that might not be attributable to other industries. We caution, however, that in the three decades in which we have been tracking this industry, impacts can be expected that can be characterized as related to general economic trends, or that would occur in any industry that targets consumer spending.

For example, if a casino generates increased employment in some communities, such activity might result in increased investment by restaurants, pharmacies, or any of a host of service industries that would be attracted by the presence of increased consumer spending. In many cases, these new businesses would compete against a presumably smaller number of existing businesses that were already targeting those market niches. If the new businesses are better capitalized, say, or have stronger brands, better locations or any other competitive edges, they could take market share from existing businesses. From the standpoint of the larger community, the arrival of new businesses would likely be perceived as a net positive. For the existing businesses that now find themselves at competitive disadvantages, the perception would be clearly negative.

With that in mind, we caution that there can be no guarantees from the Commonwealth or from casinos that all impacts will be positive. Winners and losers will be created by the introduction of casinos into a community. The public and private sectors must maintain realistic expectations, and guide public policy where it can be guided.

Our experience over the past decades has led us to develop certain cautionary notes to help ensure that expectations are realistic. While no two gaming markets can be precisely alike, there are some commonalities, including:

- Gaming should never be viewed as a panacea to cure social ills or solve fiscal problems. It is a tool that, if effectively managed, can generate capital investment, employment and visitation that in turn would provide resources that can help address a variety of other issues.
- Casinos, by themselves, cannot turn unattractive or unappealing neighborhoods or communities into attractive magnets. To effect such a potential change often requires significant amounts of planning, financial capital and political capital.
- Casinos, by themselves, cannot turn former industrial areas or other non-tourist sites into tourist attractions. That requires a concomitant investment in developing a necessary tourism infrastructure.
- Neither the challenges nor the opportunities created by a casino industry stop at municipal or even state boundaries.

Spectrum notes that the Commonwealth of Massachusetts, in the legislation we have analyzed, is suggesting a competitive bidding process for the three available licenses, a practice that offers the opportunity to most effectively guide public policy.

The heart of the competitive bidding process will be the establishment of guidelines that delineate the criteria for evaluating bids. As we will note in more detail later, we suggest that the Commonwealth needs to be as expansive and comprehensive as possible in its guidelines.

In our experience in various markets, including as participants and close observers in the 30-year history of casino regulation in New Jersey, we note the following:

- A regulatory system should start out strictly, and then be modified as circumstances change, and as the regulators become more comfortable and gain confidence that the process is moving in the right direction. In most cases, political and economic realities will be quickly established, making it difficult to move in the opposite direction toward a system of stricter regulation and tighter controls. This would be particularly true in this instance where the legislation contemplates a competitive bidding process. In such instances, the most important rules are the ones established at the outset to determine the successful bidders. Once those criteria have been established and a successful bidder has been named, the system would not allow lawmakers or regulators to go back and alter those initial criteria.
- In effect, the Massachusetts Legislature must take into account the political reality that once a casino is established and is generating tax revenue, employing people and attracting visitors, it cannot be easily undone in any practical sense. This is true for the licensing of a commercial casino, but recognition of this reality should be particularly acute for the establishment of a tribal casino. Even though the state's leverage over licensed commercial operators would diminish once a license is granted, it would still be greater than the future leverage over a tribal operator.
- The public sector in Massachusetts has broad discretion and powerful leverage at the outset to ensure that the successful bidder takes whatever steps are necessary to advance the public interest on a wide variety of fronts. Such leverage would be at its zenith during the pre-licensing phase, in which applicants would recognize that they must compete against each other in their zeal and in their creativity in developing strategies to advance the public interest. Once licenses are issued, and casinos are operational, we caution that such leverage would largely disappear.
- Using that leverage to require that all bidders submit comprehensive, credible plans that are in congruence with public policies can be justified by the proposed legislation, which essentially creates up to three regional monopolies. No other private businesses that target consumer discretionary spending, from hotels to restaurants, could reasonably expect that Massachusetts would protect them from potential in-state competition. We suggest that such protection requires a corresponding commitment to ensure that marketing, human resources and other policies put forth are designed to promote the public interest.

We are not suggesting that Massachusetts follow the policies that New Jersey had in place in the 1970s and 1980s, in which casino operators were forced to abide by a strict set of minimum standards that governed everything from the required amount of public space to inflexible rules, such as requiring casinos to offer nightly live entertainment. The latter example was one of the first mandates to be amended in New Jersey after regulators recognized that musicians were often playing to empty showrooms. In the early 1990s, most of those rules were eliminated, with the exception that licensed casinos must have at least 500 hotel rooms. Notably, the elimination of those requirements helped spark a renewed interest in Atlantic City. Today, market forces compel existing and potential operators to significantly exceed the minimums once required.

Nor are we advocating policies put forth in Louisiana in the early 1990s, when a casino monopoly in New Orleans was granted to Harrah's Entertainment under strict requirements that prohibited the operation of a hotel or on-site restaurants. In that instance, Harrah's was not able to develop a business model that would have allowed it to generate or sustain sufficient profitability.

Rather, we believe that the interests of the Commonwealth could best be served by adopting criteria that require the applicants themselves to delineate their potential impacts, and the policies they will adopt to ensure that they will endeavor to work in the public interest. This will essentially create "goal congruence," in which the public and private sectors have ascribed to mutually beneficial policies. Such policies – many of which will be analyzed in more detail later in the report – could apply to various areas of potential concern, including:

Impact on the Lottery. Applicants should develop policies designed to coordinate marketing efforts to enhance, rather than diminish, Lottery sales. Examples would include shared advertising and promotional campaigns, or efforts to market the lottery to casino visitors who reside outside Massachusetts.

Pennsylvania, concerned about the impact of slot parlors on its lottery, went so far as to require each operator to sell lottery tickets "at a location as near as practicable to the pay windows."⁶

There are currently 11 player-activated terminals and two instant ticket vending machines in Pennsylvania's six slots gaming facilities.⁷ From July 1, 2007, to February 27, 2008, those machines generated lottery sales of more than \$1.3 million. Massachusetts might want to consider a similar mandate in its casino legislation.

Impact on transportation. A successful casino, by definition, means a casino that attracts a large number of visitors. In Atlantic City, for example, casinos annually attract about 12 million vehicle trips per year, while nearly 6 million patrons arrive by bus. If Massachusetts casinos attract only one-third those totals, it would still mean 4 million vehicle trips annually, or more than 333,000 monthly. Those trips will not be evenly spaced throughout the year or month, which could mean that existing roadways that are in need of improvement will become even more crowded. Note, for example, that state Sen. Anthony Petrucci commissioned a study that estimates the cost of improving the Route 1A corridor that connects Copeland Circle in Revere to the Sumner-Callahan tunnels – which already experiences regular rush-hour traffic jams – would cost \$420 million.⁸ A casino in that area would make that traffic problem more acute.

Impact on restaurants, other businesses that target discretionary income. This area is of particular concern to restaurant owners and other small businesses, some of whom fear that casinos will compete against them for customers or for a share of discretionary spending by local residents and visitors. This is arguably an area that might be most readily addressable through the adoption of policies and strategies, such as developing joint marketing efforts with area restaurants, targeting incremental conventions and meetings, or adding signature third-party restaurants on site that are owned and operated by Massachusetts restaurateurs.

⁶ Pennsylvania Race Horse Development and Gaming Act (2004-71)

⁷ Pennsylvania Lottery

⁸ "State will have to hit the jackpot to pay for 1A improvements," *Revere Journal*, March 12, 2008, p. 1

Impact on unemployment, existing labor force. Casinos require unimpeded access to significant sources of labor that cut across various fields, as well as levels of experience and education. Massachusetts, like most states, has significant pockets of unemployment and underemployment. The commonwealth would be well served by casino licensees that have developed programs of reaching into such communities for hiring. This would require some level of training, and coordination with government and non-profit organizations, including colleges, that assist in job training, career development and placement. We also note that one concern often expressed by business people in the lodging and restaurant fields is the competition for a limited supply of entry-level labor. A coordinated approach to this issue could increase that supply, minimize that competitive threat and increase the number of jobs that earn a living wage with benefits and the potential for career growth.

Some of the minimum bidding requirements are spelled out in the legislation, such as a minimum of \$1 billion in capital investment, exclusive of acquisition costs, as well as a minimum license fee of \$200 million, and tax rate of 27 percent. While it is arguably good policy to give regulators sufficient authority and flexibility to develop a comprehensive list of criteria, it also raises an additional set of risk factors: The appointed regulators must have a sufficient base of knowledge, and be free of political and other pressures, to develop these criteria.

In effect, this means that the appointment of regulators could be the single most important policy decision following the enactment of gaming legislation.

Other states have learned that the enabling legislation that governs gaming is hardly the final step in the process, nor can even the most prescient regulators anticipate all the social, political, economic and technological trends that casinos and regulators must grapple with. New Jersey, for example, enacted the Casino Control Act in 1977, and the original statute governed many specific elements of gaming, including:

- The percentage of floor space that could be devoted to slot machines.
- The amount of public areas that a casino must include.
- The specific table games that could be offered on the casino floor.
- The hours of operation.
- The number of casinos that one licensee could own.

All these were changed in a series of regulatory reforms that took place in the early 1990s, with responsibility shifting from the Legislature to the New Jersey Casino Control Commission.⁹ These changes, as part of a significant streamlining and downsizing of the regulatory agencies, helped fuel a gaming renaissance in Atlantic City. Just as important, however, the changes indicated recognition on the part of legislators that they could not expect to understand all the critical nuances and issues that accompany gaming. They had to cede that authority to regulators in order to make the process more effective.

Massachusetts has the opportunity to learn this lesson from the outset. For example, our meetings with various public and private officials that were undertaken as part of our research

⁹ “Years of Change: 1990-1994,” New Jersey Casino Control Commission

indicated some rather strong fears and concerns in a host of areas that cannot easily or effectively be addressed in legislation. These include such examples as:

- Concerns that different regions of Massachusetts have little in common in terms of their economies, cultures or geography. Officials in various regions fear that a one-size-fits-all government policy could hurt the interests of rural regions that lack the political clout, funds or infrastructure to meet the demands of a major gaming operation.
- Concerns that gaming would be so atypical from other Massachusetts industries that it would detract from such industries as health care, academia, life sciences and others that have helped distinguish the Commonwealth, and that have served as a magnet for thousands of well-paying jobs.

Regulators – not legislators – are best equipped to serve as vigilant watchdogs in protecting the public interest on these and other issues. They can set clear criteria to ensure that casinos are producing workable plans that meet the needs of, and leverage the assets of, their local areas.

At the same time, regulators must have the will – and the necessary protections – to make difficult decisions as needed, including the freedom to determine that no application meets their standards.

This illustrates and underscores a core principle that underlies and permeates this entire analysis: Many of the impacts of legalizing casinos in the Commonwealth of Massachusetts should not be viewed as either static or inevitable. Indeed, with a coordinated approach to ensuring goal congruence between the public and private sectors on gaming policy, the benefits could be enhanced and the drawbacks could be minimized.

This report, where appropriate, will endeavor to identify those areas that could benefit from such efforts.

Understanding, hearing concerns

Spectrum Gaming Group has endeavored to reach out to a broad array of public and private leaders throughout Massachusetts who have a stake in the important issue of developing destination casinos. Whenever possible, we have attempted to address their concerns and answer their questions.

Addressing many of the concerns requires us to ensure a complete understanding of some tenets that are central to our analysis:

- Destination casinos, as envisioned by the legislation that we have analyzed, are significantly different from convenience-driven, local-oriented casinos in terms of their business models, their demographic and geographic reach, and in their ability to advance public policy.
- A competitive bidding process can be effective if it is accompanied by robust, rigorous and comprehensive licensing requirements.

Not surprisingly, many of the most detailed and telling questions came from members of the Massachusetts Legislature, who must make the policy decisions that will govern the

Commonwealth. We are addressing some of their specific questions in this section of the report, as we believe that they are asking questions and targeting issues that are likely to have widespread interest.

As state Sen. Stanley Rosenberg noted in interviews with us, applying what has occurred in other states “only goes so far,” as each situation is different. And in our report, we make the point that Massachusetts clearly has its own unique set of circumstances that planners will need to address.

Rosenberg – who clearly did a great deal of research on the casino topic – wanted the report to estimate how many patrons could be expected to come from the local area. Based on our research, as noted in detail in the report, we expect:

- Destination casinos would collectively generate between 18,000 and 27,000 visits per day.
- Three Massachusetts destination casinos would draw between 43 percent and 65 percent of all Massachusetts gaming trips and spending, or between \$572 million and \$864 million annually.
- Massachusetts residents have been spending an estimated \$1.1 billion annually on gaming alone in Connecticut and Rhode Island. Massachusetts casinos could recapture about \$600 million to \$700 million of that annual total.

Rosenberg also said it was important to estimate the number of trips per year by patrons. Our research shows that the number of trips per patron per year would be roughly seven. We estimate the loss per patron would be about \$147, although that will vary slightly by region.

Rosenberg also raised the issue of increased crime associated with casinos. As our report endeavors to point out in great detail, crime must be evaluated based on increased visitation, increased opportunity, and must be examined in terms of whether law-enforcement agencies have the funding to address added demands. Based on our research in other gaming jurisdictions, law enforcement struggles to cope with crime committed on the casino floor. Regions with destination resort casinos, similar to that envisioned by Massachusetts, could realistically anticipate as many as 300 larcenies a year occurring, along with some robberies. In addition, as we point out in our report, a significant increase in DUI arrests can be expected to occur. Neighboring and host towns might experience an increase in break-ins. Still, our analysis emphasizes the following points:

Our experience has led us to determine that the following guidelines must be applied if this subject is to be properly analyzed:

- Casino-related crime must not be confused with crime that might be related to increased economic activity.
- Visitor population must be taken into account when analyzing data.
- To the extent possible, external factors such as the urban or rural nature of a community must be factored into the analysis.

Another issue Rosenberg raised concerned the cost of treating problem gamblers. It is difficult to estimate how much casino gambling will exacerbate compulsive gambling, but, as noted in more detail in the appropriate section of our report, the cost of out-patient treatment of a

problem gambler in Indiana is roughly \$2,500. Indiana, recognizing that the current amount spent is inadequate, is about to more than double its annual budget to \$5.2 million over the next five years.

Rosenberg also wanted to know how certain state laws, such as mandatory health insurance, might be impacted in the event that Massachusetts eventually hosts a tribal casino that would be governed by federal laws and tribal sovereignty. While we cannot offer a legal opinion as to the relationship between state and tribal governments, we can address such issues from a practical perspective. It is highly unlikely that any casino in Massachusetts would seek an exemption from state rules governing health insurance, and, notably, both Connecticut Indian casinos use their health benefits as a key attraction for both managerial and line employees. (Both casinos tout their health plans as being “unsurpassed.”) In part, such benefits can help tribal casinos compete against casinos that are owned by public corporations. Tribes cannot offer equity stakes in their operations, thus benefits become more important in the realm of attracting talent.

Traditionally, the benefits package offered by a casino – whether tribal or commercial – is an excellent one, with some casinos offering policies that come with no employee contribution. Others require only a minimal contribution. The industry uses its health benefit packages as a recruitment tool. In our experience, casinos often endeavor to become an “employer of choice” in their communities, both to retain quality workers and reduce turnover.

Additionally, casinos in many areas have large sections of their workforce governed by collective-bargaining agreements that often place significant emphasis on health benefits.

The Swift Commission in Massachusetts,¹⁰ citing a 1997 poll of casino workers, found that:

- 50 percent of those polled thought their benefits were better than average; and
- 48 percent stated they would be unable to pay for any medical insurance if it were not provided by the casino.

The Burke report also noted: “Workers shared the following impressions of the effect of gambling on their standard of living:

- 64 percent reported improvement in their wages since they began working in the industry;
- 61 percent reported improvement in their medical benefits; and
- 36 percent reported improvement in their job security.

The poll found:

¹⁰ Expanded Legalized Gaming In Massachusetts: A Presentation of Gaming Regulation, Economic Development Impact, Fiscal Impact and Social and Cultural Impact, by The Commission to Study the Potential Expansion of Legalized Gaming, Essex County District Attorney Kevin M. Burke, Chairman. Burke now serves as Secretary of the Executive Office of Public Safety. The 19-member commission was established pursuant to Executive 441 under Governor Jane M. Swift. Burke has also served on Governor Patrick’s internal study group on gaming, formed in 2007, that was chaired by Housing and Economic Development Secretary Dan O’Connell.

- 20 percent of the members reported their jobs helped them buy their first homes;
- 18 percent reported their jobs assisted them in moving to a better home; and
- 8 percent reported their jobs contributed to paying for their own education.”

Rep. Amy Grant cited a number of questions that must be considered in any discussion as to whether casinos should be approved, and how public policy should govern gaming. She questioned, for example, whether sufficient attention is being paid to the relationship between transportation and tourism. Since more tourists means more traffic, can the infrastructure in areas targeted for potential casinos support that traffic? She also noted that Connecticut and its casinos will likely respond to a competitive challenge from Massachusetts. How would that challenge affect the future of this potential industry, and – when considering competition and other threats – how reliable are projected revenue streams?

Rep. Thomas Conroy also took great pains to raise issues that should be central to any debate governing casinos. He suggested that some of the debate has included numbers that could be misleading, such as average compensation for casino employees. We agree that any consideration of an average salary must put those numbers in the proper context. When you average the salary of a CEO, for example, and housekeeping staff, you get a number that can easily be misinterpreted. With that in mind, we have also calculated the median salaries, without benefits.

The median compensation level, without benefits, in our model, based on the salary in the 50th percentile of job titles, is \$42,390 for a casino in Boston, and \$41,600 for Massachusetts overall. When you weight that measurement by calculating the median based on the actual number of employees, the median compensation for a Boston casino drops to \$22,901 and \$22,963 for Massachusetts. Those numbers, however, can also be potentially misleading. Many of the positions that are hired in large numbers tend to cluster at the lower end of the scale. When we eliminate housekeepers, valet parkers and casino dealers (whose compensation level is artificially low because it does not reflect tips), the median compensation is \$25,459 for Boston and \$25,168 for Massachusetts.

Conroy, in discussions, pointed out to us the benefits of what Professor Michael E. Porter of Harvard University has termed “Clusters of Innovation.” Porter – whose work is cited at various places within this report – summarized this concept as: “In healthy regions, competitiveness and innovation are concentrated in clusters, or interrelated industries, in which the region specializes. The nation’s ability to produce high-value products and services that support high-wage jobs depends on the creation and strengthening of these regional hubs of competitiveness and innovation.”¹¹

The core question is whether casinos can assist in developing such clusters, or whether gaming would either work at cross-purposes or divert attention and resources from such efforts.

The answer to that question ultimately lies with whether the enabling legislation and the competitive bidding process are part of what Porter deems to be a necessary public-private partnership. Indeed, one of our core suggestions is that all aspects of the process governing the awarding of licenses and the oversight of casinos must be fully aligned in that the goals of the

¹¹ “Clusters of Innovation: Regional Foundations of U.S. Competitiveness,” by Michael E. Porter

public and private sectors must be congruent in all aspects. Additionally, we suggest that gaming must be fully integrated into the tourism sector of the economy.

Porter notes: “Regional strategies should encompass a wide range of clusters, and be attentive to clusters that overlap. Overlapping clusters offer potential synergies in skill, technology, and partnership. ... The majority of traded jobs in any region are in clusters that are not generally perceived to be ‘high-tech’ (e.g., business services, financial services, education and knowledge creation, transportation and logistics, and hospitality and tourism). In order to meaningfully increase overall regional prosperity, innovative capacity must be built in many clusters.”

We emphasize that hospitality and tourism can continue to be a meaningful cluster in Massachusetts, with gaming being used in part to bolster the conventions and meetings business. It has done so with great success in other markets, most notably Las Vegas, where various industries hold regular events. COMDEX (Computer Dealer’s Exhibition) held its annual event in Las Vegas every year from 1979 to 1993. Its successor show, INTEROP, also holds its annual show in Las Vegas.¹²

As noted in more detail in the report, gaming is an increasingly important tool in the arsenal of marketing professionals seeking to attract conventions and meetings. Gaming can be a valuable entertainment option, and can add more rooms to the regional inventory. A casino can also help position a market as offering more value for the convention dollar.

Conroy asked a number of other probing questions as well, such as whether or not casinos would clash with the existing culture in areas such as technology and local history. Atlantic County, New Jersey – where casinos are the largest industry – is also home to the Federal Aviation Administration’s William J. Hughes Technical Center, which employs 3,500 people. This makes it the county’s second largest non-casino employer.¹³ The Hughes Center – which is 10 miles from the nearest casino – continues to grow, and is adding a research park as well.¹⁴

Our report addresses in detail the question of whether a casino can be fully integrated into a tourism base that relies heavily on historical interest. We note in that section that Philadelphia perhaps offers the best example of a major northeastern urban center that is combining gaming with a rich colonial heritage and vibrant academic and technology centers. Indeed, Philadelphia – which is only 60 miles from Atlantic City – is immediately bordered by two casinos, and is allowed two more in its downtown area.

Major universities in the Philadelphia region – from the University of Pennsylvania to Drexel, Weidner and Temple – have added some form of gaming and hospitality management courses to their undergraduate, graduate or executive education programs.

The larger question that Conroy asked us to address is whether casinos can serve as a net economic benefit to a region. Various examples abound as to how casinos can assist in economic growth and the related area of improving the quality of life in a region.

¹² www.comdex.com

¹³ Business Forecast, *Press of Atlantic City*, January 27, 2008

¹⁴ “Summit Reviews Economic Hopes for Atlantic City,” *Press of Atlantic City*, April 26, 2008

One example can be found in Lemay, Mo., near St. Louis, which was recently placed 85th on the Fortune Small Business list of “Best Places to Live and Launch.” The *St. Louis Business Journal* noted that Lemay “is waking up, thanks to Pinnacle Entertainment’s \$450 million River City casino project that is expected to create more than 1,000 new jobs and is scheduled to open in Lemay in the first half of 2009. Lemay already boasts a 20,000-square-foot startup incubator, a supportive county economic council, and a strategic location on the Mississippi River, according to *Fortune*. The local economy is currently dominated by small manufacturers, but *Fortune* said the influx of tourists should stimulate the retail and service sectors.”¹⁵

Such anecdotal information is of limited value, of course, and must be balanced by what Conroy seeks: independent quantitative analysis as to the economic impact of destination casinos. We endeavored to do that in our analysis by combining proven models with conservative assumptions.

Our report shows, for example, that every direct job in the casino industry will likely yield roughly 0.5 jobs elsewhere in the local economy. This is in keeping with the experience of other markets – and the general predictions of widely used modeling programs. (See the details later in the report.) Such jobs are created in a variety of ways, from increased government spending and hiring, to dollars from employees rippling through the local economy.

Other areas of concern expressed by Conroy and others require a more thoughtful, qualitative response that is not always clear when analyzing the numbers that have been developed through economic models. For example, we have spent considerable time in areas of Massachusetts that are prosperous, as well as a few that have significantly less hope. However, we expect that such areas – which would include Revere and Chelsea, both in the Boston area – would potentially benefit from gaming, if given the benefit of good planning. Such areas would have access to mass transit, an essential element in matching employment to those most in need.

As we describe in detail in the report, a comprehensive training program that is developed and instituted at an early date could help ensure that the people who need those jobs are the ones who get them. This indeed addresses another concern expressed by many, that jobs go to existing Massachusetts residents rather than serve as magnets for those who presently live elsewhere.

While there can be no guarantee of such a result, we recognize that policies that encourage such employment of local residents equate to sound public policy: Such policies would simultaneously generate more dollars into the local economy without a concomitant increase in demand for services. When such policies are successful, as shown in the report, demand for government services by individuals can actually decrease.

An important undercurrent of this debate deals with the essential, undeniable issue of problem gambling. Both the casino industry and the public sector in all jurisdictions that we have studied have clearly evolved, and it is now widely accepted that comprehensive programs must be instituted to minimize the impact from problem gamblers, and provide them with treatment.

Conroy correctly notes that more casinos would exacerbate that problem, and slot machines might be particularly conducive to creating more problem gamblers among certain subsets of the population. Still, the experts in this field whom we have been interviewing and

¹⁵ “Fortune ranks Lemay high for business, lifestyle mix,” *St. Louis Business Journal*, March 26, 2008

working with for three decades do not advocate abolition, nor do they oppose legalization. They simply want the resources to address the problem, which we analyze in detail later in the report.

The issue of problem gambling extends beyond funding, however. In our view, the bidding and licensing process offers the greatest opportunity to ensure that any casino licensee puts forth a credible, comprehensive and ambitious plan to deal with this issue. And that is a theme that runs through our entire report in a host of areas, from employment to mitigation funding: Those who vie for, and successfully earn the privilege of licensure, are granted regional monopolies where they will enjoy some level of protection from in-state competition. No other private industry could expect such protection. The Commonwealth should match that protection by requiring a concomitant level of responsibility from casino licensees to serve the public interest while realizing an acceptable return on investment.

The remainder of this section is devoted to detailing the array of concerns expressed to us. We are grateful to all the people who spent time with us to improve our understanding of the areas of concern throughout Massachusetts.

Most of the people we spoke with were eager to learn from the casino experiences in other states and were interested in seeing analyses based on realistic data. The cautions and questions they emphasized are as follows:

Desire for accurate, sustainable mitigation that fits the localities

Many of the people with whom we spoke commented approvingly on the general commitment to mitigation in the original legislation. Some expressed concern about the mechanics as to how the various revenue disbursements would be handled in practice. For all, major questions remain.

Some of the questions raised included whether the significant financial obligations spelled out in the bill for mitigation would render casinos in Massachusetts unattractive to potential developers and investors, and whether this could translate into projects not being built – or not being able to meet the mitigation obligations.

Most of the people with whom we spoke assumed that the casinos could be built and focused their concerns about mitigation on the delivery of the payments to localities – and not just the host community, but also the surrounding communities that would bear the brunt of increased traffic, emergency services and population (and its resultant impact on school funding, concerns strongly expressed in western Massachusetts).¹⁶

We heard several suggestions for ways to ensure that the funds made it to the affected localities, including giving funds proactively to affected cities and towns rather than forcing them to bear the burden and seek reimbursement (a view expressed in southeastern Massachusetts).

And many residents and leaders, especially in western Massachusetts and those with statewide responsibilities, gave strong emphasis to the argument that any casino impact has to be viewed by location rather than as a statewide phenomenon. The potentially unfunded mandates that they believe would arise are problematic for smaller cities and towns, as they do not have

¹⁶ Our interviews took place over several months, and straddled the legislative debate and voting.

scalable infrastructure to handle the changes in demand. The concern is that the localities need to be financially held harmless.

Particular questions about how mitigation would work and what would be covered include:

- What happens to the host communities? Does local aid just get offset against costs so these communities in effect, break even?
- How are mitigation funds apportioned to the surrounding municipalities? How much of a say do they have in the planning process?
- What happens when casino revenues dip and mitigation funds decrease, but demands on the local communities remain the same?
- What is the burden of proof for impact? Does it involve engineers to study traffic, for example? And who pays for those assessments?
- What is the likely increase in population to anticipate? Specifically, what is the likely proportional increase in Special Education and language needs in schools from children of casino workers?
- What is the impact year by year for various public services, from law enforcement to the demands on water supply? Are the mitigation dollars designed to cover all such impacts?

Spectrum cannot possibly analyze all community impacts because many of them are subjective and personal and they can neither be satisfied by mitigation dollars nor measured by quantitative means. These typically involve quality-of-life issues, those that make up the fabric of a community. In many Massachusetts communities, the presence of a casino resort could impact a way of life that has been enjoyed for more than two centuries.

We found these concerns poignantly aired in a May 2008 meeting of the Western Massachusetts Casino Task Force,¹⁷ whose members represented such towns as Belchertown (pop. 12,968¹⁸), Brimfield (pop. 3,330), Holland (pop. 2,407), Monson (pop. 8,359), Palmer (pop. 12,297) and Wilbraham (pop. 13,473).

In particular, we note the case of Monson, which in fall 2007 established a Local Casino Study Committee. Among its actions, the committee in March 2008 conducted an unscientific survey of residents to determine their concerns about “the potential siting of a casino in an abutting community upon Monson.” The committee received 782 responses; 122 indicated they had no concerns.

Among those who answered “yes,” they were asked to check whether they had concerns in 11 listed subject areas. Following are their responses (they could check more than one):¹⁹

- 360 – character

¹⁷ The Western Massachusetts Casino Task Force was created in fall 2007 in response to Governor Patrick’s casino proposal. It is comprised of representatives from 11 towns and maintains a neutral stance on gaming.

¹⁸ All population data from U.S. Census Bureau, 2000 figures

¹⁹ Monson Local Casino Study Committee, survey results memo, May 5, 2008

- 350 – traffic
- 271 – crime
- 257 – accidents
- 240 – taxes
- 218 – schools
- 215 – housing
- 207 – environment
- 169 – business
- 128 – pollution
- 118 - water

In nearby Sturbridge, Town Administrator James Malloy said town officials have similar concerns. The town is home to Old Sturbridge Village, a living museum that attracts 250,000 visitors per year, and is home to Sturbridge Common Historic District, which is listed on the National Register of Historic Places. “The character of the community – that is our biggest concern. ... Having a casino, especially on the scale of Foxwoods, is totally inconsistent with the town’s character,” Malloy said.²⁰

Some quality-of-life issues should be asked of any high-volume business that would be placed in a position to impact small towns, whether an amusement park, a casino or a Walmart: Will there be a significant increase in traffic through the towns? Will the size and nature of the town’s population change? What are the impacts on water quality? What are the impacts on land usage and residential and commercial development?

Some of these concerns are exacerbated by the inherent nature of a casino, which operates 24/7/365 (in Massachusetts this would subject to Gaming Control Authority approval), thus boosting traffic, artificial light and noise during hours and days that would otherwise be more serene.

The proposed legislation requires local approval before any casino can be developed. Still, we emphasize that such issues cannot be confined to the casino-host town, as illustrated by the Foxwoods example (see our section on the Foxwoods-Mohegan Sun contrast in Connecticut). The towns en route to Foxwoods have been forever altered as a result of the casino’s success. In this regard, we find the words of Richard Blumenthal, who has been Connecticut’s Attorney General since the pre-casino year of 1991, most instructive for Massachusetts:

“If I had one major piece of advice [for Massachusetts], it would be to be more sensitive to the surrounding local communities. In Connecticut, and it’s really a criticism [of the state] more than the tribes, we have failed to provide for police, fire, roads, upkeep, other kinds of economic burdens that have hit the communities immediately surrounding the two reservations [of Foxwoods and Mohegan Sun]. Certainly they’ve created traffic and other kinds of issues.”²¹

It is evident that any town hosting or surrounding gaming has a considerable stake in the development of a casino resort. Should the occasion arise where the Commonwealth’s gaming

²⁰ Interview June 12, 2008.

²¹ Speaking at the “Big Gamble” symposium, Quinnipiac University, March 18, 2008

legislation is revisited, Spectrum recommends representatives of such towns be included when considering the issues of siting, mitigation and selection of the casino developer.

Further, we recommend that each applicant compensate the Commonwealth or host town/county/region for a preliminary social-, economic- and infrastructure-impact study of host town/county/region. The successful applicant would then be required to compensate the Commonwealth or host town/county/region for an impact study every five years, or other reasonable interval.

Concern that destination casinos will be a poor fit for Massachusetts

Many interviewees framed their concern about casinos, or their willingness to support casinos, in terms of the correctness of the fit for the Commonwealth. Some believe that Massachusetts has led the way in so many economic and cultural ways that they are concerned that casinos would diminish or detract or distract from those standards and accomplishments. Others believe that casinos would not put the exceptional gains and role of Massachusetts at risk, and would add to the economy and life in the Commonwealth in useful ways.

While data and analysis will not fully address these differences, here are the main concerns and counter points:

Economic: The Massachusetts economy is focused on higher education and healthcare/life sciences, and future activity should enhance this economic and cultural capital or create or contribute in meaningful new ways, e.g. green jobs. Casinos do not add to the economy in this way.

The current economy does not satisfy the needs for lower skilled jobs. Casinos would redress the need for these kinds of jobs with solid benefits.

Cultural: Massachusetts has a unique and vital culture, steeped in history and the arts, and layering casinos on top of it is a disservice.

Casinos, especially in Boston, could provide entertainment for adults in a form that currently is missing and could be attractive to residents and visitors. With The Lottery, Suffolk Downs, and neighboring states' casinos, gambling already exists in Massachusetts and has not proven to be problematic in this context. Additionally, a resort casino would regularly attract headline and other entertainers, enhancing night-life attractions.

Government involvement: Supporting casinos is not the proper role for the Massachusetts State government. The Commonwealth, with a history of leadership on important social and economic issues, should advocate activities that are in line with its long-term goals such as developing economic sectors that cultivate and inspire growth, supporting downtowns, and other initiatives.

With neighboring states already sponsoring gaming and with the potential for an in-state Indian casino, the Commonwealth needs to act or it could lose revenue.

Questions about the effects of demand and substitution

Consistently in the course of any study of the economic impact of casinos, there are assumptions or an interest in understanding the potential demand for casinos and the substitution

effects concerning local patrons and business. In particular, some of the Massachusetts people interviewed cautioned about the negative impact on existing local entities.

Noting that there has not been great data on the substitution effect, people asked:

- Do local people continue to go to other casinos if one is built nearby? Will they want the convenience of a local outlet or would they prefer to get away, not gamble in front of their neighbors and thus still go to Connecticut?
- If local people go to local casinos, will they still support other local entities? Are the people who frequent, for example, downtown Northampton, going to shift some of that support to a casino in western Massachusetts?
- Do people come from elsewhere to patronize casinos? What is a credible count of how many from Massachusetts go to Connecticut? Would visitors to Boston add an extra night to their stay if there were a resort casino?
- Do people who travel to a casino support local businesses? Do they just visit gas stations and convenience stores or also local restaurants and shops? Are there ways to mitigate the negative effects on local businesses, such as including local procurement requirements in legislation? Is this something the government should be doing?
- How will all this hold up over time?

Questions about about a tribal casino

Many of the people we spoke with referred to a potential tribal casino as a key factor in their thinking about casinos in Massachusetts. While their views about its impact and how the Commonwealth ought to respond differed, all were curious about the jurisdictional issues relating to tribal law and sovereign nation status, and how federal and state law apply to the entity.

Questions regarding the Lottery

Given the dependence of cities and towns on revenue generated by the lottery, many people told us of their concern that casinos in Massachusetts would substantially reduce the Lottery's – and, in turn, the municipalities' -- revenue. They contend that the lottery probably already has peaked and the addition of casinos would put revenues at greater risk. They are not certain that the original legislation offers a reliable response for the long term. One common question: in general do state lottery receipts drop off in a meaningful way when a casino becomes active in a state?

Caution that proper planning is needed for casinos

People on different sides of the issue and with different roles in their communities spoke of the need to plan well and early for casinos. They advocated getting interested and affected parties to plan for and work through issues early. Also, they believed that many of the issues will need to be revisited over time.

Some particular issues of concern include:

- Increased traffic/transportation-related problems. Some prefer that casinos only be built in areas where mass transit systems exist so as to minimize the environmental

impact. Others caution that the existing traffic problems surrounding an East Boston location, including routes 1 and 1A, would be exacerbated and therefore need to be addressed. If a casino were built in western or southeastern Massachusetts, people wonder how much traffic would stick to the major roads and how much would end up flowing through the smaller roads. Such traffic-related eventualities warrant planning and mitigation.

- Increase in the need for emergency medical services. Not only may there be an increase in EMS – needs given the clientele of the casinos – but the first responders also may be overburdened. A shortage of coverage would mean a reliance on mutual aid, a resource that also would be strained.
- Thoughtful planning for fire safety. Fire prevention and suppression requires early planning and cooperation among local and state officials regarding 1) egress; 2) evacuation of heavier construction; 3) smoke and air handling controls; as well as having well-trained staff in 1) fire exiting operations; 2) evacuation; 3) maintenance.
- Increases in gambling with negative effects on individuals and families.
- Increases in crime, prostitution, drinking. There was range of opinion regarding how much to anticipate and plan for increases in these activities. Smaller communities in particular expressed greater concern, as they would have to staff and fund a response to such issues.

Impact of Indecision

Several people with whom we spoke also raised concerns related to the indecision surrounding the casino issue. They contend that key pieces of land, in Palmer and Revere, for example, will not be developed until the casino issue is resolved. The uncertainty and delays therefore stave off local improvements. Also, many wondered how many casinos would be appropriate, noting that three, as proposed, might be too many.

Section I: Macro Gaming Trends, Issues

Hubs vs. spokes

The U.S. gaming industry has developed over the past three decades in fits and starts, fueled by a variety of macro factors. For example, national recessions in the early 1990s and at the dawn of this decade led to the legalization of riverboat gaming in Midwest states and to the expansion of gaming in a variety of Eastern states, such as New York and Pennsylvania.

The arguments that appear to gain the greatest political traction in various states can be summarized thusly:

- The racing industry is in steady decline, and needs a new source of funding in order to ensure it will remain competitive, particularly in light of the introduction of “racinos”²² in neighboring states that use slot machine and other revenue to subsidize purses.
- States are in need of new sources of revenue, a need that becomes particularly acute during periods of recession when sales taxes and other levies are often in decline.
- Adults often cross state lines to visit casinos in other states, thus depriving their home state of needed revenue while subsidizing governments in other states.

The success of such arguments makes it increasingly clear that states respond to their neighbors, often creating what can be termed an upward spiral. Witness, for example, what has occurred in the Mid-Atlantic region over the past dozen years.

- In 1994, West Virginia approved slots-only racinos, and soon opened four such properties. A year later, racinos opened in nearby Delaware, which has three.
- A decade later, Pennsylvania lawmakers approved Act 71, which authorized seven racinos, five stand-alone slots-only casinos and a limited number of slots (500) at two additional resorts.
- Shortly after that, West Virginia authorized live table games at its racinos.
- Officials in both Delaware and Pennsylvania have begun discussing such counter-moves as adding live table games and, in the case of Delaware, of taking advantage of a federal statute that allows Delaware the opportunity to be one of only four states that can legally offer sports betting.²³
- Maryland, prodded by arguments that its own racing industry needs support and that its adults are gambling at casinos in other states, will hold a November 2008 referendum to legalize up to 15,000 slot machines at five locations.

²² “Racino is a portmanteau that combines two words: racing and casino. It has been in general use for less than a decade.

²³ Federal law enacted in 1992 outlawed sports betting except in states that already had some level of pre-authorization: Nevada, Oregon, Montana and Delaware. New Jersey had a limited opportunity at the time to enact sports betting, but its Legislature declined to act.

New Jersey, meanwhile, had responded during this entire period with its own efforts to protect and enhance the casino industry in Atlantic City. These efforts ranged from widespread regulatory reform in the early 1990s to legislation a decade later that encouraged casinos to develop non-gaming attractions. These incentives allow developers to retain some of the tax revenue generated on site for a limited time to help offset the cost of construction.

The Gormley-James legislation²⁴ created up to 11 “entertainment/retail districts” in Atlantic City. Qualifying projects:

- Are exempt from construction sales tax
- Receive a rebate on sales taxes, up to \$2.5 million per year for 20 years
- Receive a rebate on incremental unique local entertainment taxes generated for 20 years

The incentives have encouraged several major expansion projects in Atlantic City. The following table lists the approved projects under this program:

	RETAIL	HOTEL	PARKING	COST	JOBS	START	END
PROJECT	(sq. ft)	Rooms	Spaces	(\$millions)	(permanent)	Date	Date
Tropicana	179,000	500	2,400	\$230	2,000	1/02	11/04
Caesars	415,000	0	3,000	\$215	1,190	9/03	6/06
Resorts	168,000	1,159	1,500	\$108	514	3/02	n/a*
A.C. Outlet Shops	670,000	0	1,600	\$205	1,348	5/02	7/04
Borgata	179,000	800	1,400	\$563	1,725	3/05	6/08
Harrah's/Showboat	257,646	1,360	3,697	\$688	1,088	5/02	5/08
Trump Plaza	504,000	4,612	9,850	\$1,542	2,662	n/a	n/a*
Revel	420,000	1,822	7,793	\$2,300	5,457	11/07	10/10*
TOTALS	2,792,646	10,253	31,240	\$5,743	20,307		

Source: New Jersey Casino Reinvestment Development Authority / * - Project not yet completed

Viewed collectively, these moves and counter-moves have fueled growth in annual casino revenues within the mid-Atlantic region from \$3 billion in 1994 to more than \$6.5 billion²⁵ at present.

One result of gaming’s expansion throughout the nation has been the evolution of the casino industry into what Spectrum has termed the “hub-and-spoke” business model. We define the “hub” markets as those with the following characteristics:

- A relatively low tax rate.

²⁴ The principal sponsors were former New Jersey state Senators Sharpe James, D-Essex, and William Gormley, R-Atlantic.

²⁵ For purposes of this estimate, we include racinos in lower New York in the revenue total, as they compete within the same general customer base.

- A relatively high degree of capital investment.
- A concentration of casinos in one location.
- A relatively broad demographic and geographic reach.

The “spokes,” by contrast, are characterized by:

- Relatively high tax rates that discourage significant capital investment.
- A limited number of licensees with a degree of geographic protection and separation.
- A focus on local, convenience-driven, gaming-centric customers.

On a national level, the most prominent hubs are Las Vegas, Atlantic City and the Gulf Coast of Mississippi (most prominently Biloxi). The spokes – which tend to be the fastest-growing segment of the gaming industry – are gaming properties in states such as Delaware, New York, Pennsylvania and other smaller markets.

The proposed legislation in Massachusetts would arguably be termed a “hybrid hub.” Because the legislation suggests a base 27 percent tax rate (relatively low by the standards of spoke markets, which often have effective rates in excess of 50 percent), along with a minimum \$1 billion in capital investment, the policy is clearly designed to build up to three hub properties, i.e., destination resorts. At the same time, however, the legislation has some characteristics of spoke markets: chiefly, a limited number of licenses as well as geographic protection.

Connecticut would be an example of a hybrid hub, as it has limited the number of participants. The state has two tribal casinos – Mohegan Sun and Foxwoods – that have negotiated compacts with the state that include a provision in which the state gets 25 percent of slot revenue (not tables), while the tribes are assured that the state will not authorize any additional casinos. Should there be additional casinos, the tribes would no longer have to provide the 25 percent share of slot revenue.²⁶

In a practical sense, hybrid hubs would have to rely on a combination of local customers, both gaming-centric and non-gaming centric, as well as efforts to generate visits from out-of-state tourists. Such properties would still have the ability to create some level of critical mass in which different attractions – with different brands at multiple price points – would be in close proximity to each other, albeit under one general ownership.

The core question then is: Can hybrid hubs perform as well as larger, regional hubs in advancing the public interest? The answer is yes, subject to certain qualifications: Hybrid hubs, such as those proposed in Massachusetts, would operate under tax rates generally higher than those that are in place in hubs such as Nevada, New Jersey and Mississippi. This tax rate, as will be noted in more detail later in the report, has an important impact on returns on investment, and thus would not automatically generate the same level of capital investment as would, say, a destination property in a lower-tax market. Additionally, a hybrid might not attract the critical mass of capital in one location that would be a powerful magnet for a broader geographic and demographic range of visitors.

²⁶ Tribal Gaming: Sharing Revenue with States, National Conference of State Legislatures 2004

These caveats can be ameliorated, however, as hybrids – like hub properties – have the potential to add multiple brands at multiple price points under the same general ownership, or license. Examples of this would be the Harrah’s properties in the center Boardwalk of Atlantic City – where customers can play at Caesars, Bally’s, Claridge or Wild Wild West, which are all under the same ownership – and, effectively, under one roof. Other examples would include the planned \$4 billion Echelon project in Las Vegas, as well as properties such as Mandalay Bay, which house various hotel flags at different price points under one corporate umbrella. Foxwoods in Connecticut is another example, having opened the \$700 million MGM Grand at Foxwoods to complement its existing properties, which are already divided into multiple casinos and hotels.

This analysis is being performed at a time of revenue declines at many gaming markets in North America, notably in the Northeast: Combined year-to-date (through April) gross gaming revenue for Connecticut (slots only), Rhode Island and New Jersey is down 5.1 percent, or \$116.4 million, compared to the same period last year.

Such declines raise the question of whether gaming has reached the saturation point in the Northeast. Or, is this decline part of a cyclical downturn due to current economic problems, ranging from high gas prices to tighter lending practices from banks?

Historically, the notion that casinos were resistant to such trends could be tied to their relatively small demographic base, and dependence on customers who are gaming-centric in their spending habits, i.e., they view gaming as a serious pastime. Such customers would be less willing to reduce their gaming budgets, and would, in many cases, view casino visitation as value-oriented: They enjoy complimentary goods, beverages and/or hotel rooms (“comps”), and have a theoretical potential of leaving with more than they came with. Any movement beyond that base will inevitably link the industry more closely to economic trends.

Additionally, we do not know if this particular economic downturn will be worse than previous recessions. Economists note, for example, that the current downturn (which, at this writing, cannot be referred to as a recession as it does not meet the definition of a recession, which is two consecutive quarters of a decline in gross domestic product) is more linked to declines in housing prices. It is already clear, however, that the downturn – fueled by declining housing prices and rising commodity prices in fuel, food and other areas – is a major factor behind the decline in gaming revenue in many major markets in recent months.

Evolution, success of hub markets

The other question, with respect to reaching a saturation point, can best be addressed by looking at the recent history of casinos in North America. Prior to the opening of casinos in Atlantic City in 1978, Nevada held a monopoly on casinos, and properties in Las Vegas and elsewhere in the state were able to thrive by virtue of having such a monopoly. Atlantic City then held a monopoly in the Mid-Atlantic market, while the two casinos in Connecticut essentially held a duopoly on the New England market.

These monopolies are eroding. At the end of 2006, there were nearly 63,000 slot machines and 2,000 live table games at 57 Indian casinos in California,²⁷ the key feeder for Nevada casinos. In the East, racetrack and Indian casinos opened and/or expanded in New York, Pennsylvania, Rhode Island and Delaware, thus eating into the Atlantic City and Connecticut feeder markets. As these monopolies and duopolies continue to erode due to the growth of gaming elsewhere, it forces operators in the larger markets to adapt to different business models: They must go beyond the core gaming-centric customer base to reach a broader array of affluent adults.

Spectrum estimates that Atlantic City generally has attracted about 34 million visitor trips per year,²⁸ which we project amounts to about 6 million adults visiting about 5 to 6 times per year each. Within the same geographic area, there is a far greater number of adults who do not visit Atlantic City: 20.6 million adults reside within a 120-mile radius of Atlantic City.²⁹

Such estimates indicate that the number of adults who could theoretically be persuaded to visit Atlantic City if it offered more attractive amenities is greater than the number of adults who would be tempted to shift some of their gaming business to more convenient casinos in Pennsylvania, New York and elsewhere.

This phenomenon has already proven to be valid in Las Vegas. Las Vegas was forced to reinvent itself after the expansion of gaming in other states. Starting with the opening of the Mirage in 1989, the transformation has been astounding – and is continuing. Several new projects – including the \$7 billion CityCenter by MGM Mirage and the \$4 billion Echelon by Boyd Gaming – are under construction and gambling revenue continued to increase until the current economic downturn.

Few people visit Las Vegas because it is the most convenient place to gamble. While its unique status as a legalized gambling destination was Las Vegas' *raison d'être* for most of its existence, that has not been the case for many years. In fact, visitation to Las Vegas remains strong even though casino gambling is now located in direct Las Vegas feeder markets. Even with the growth of California into a \$7.7 billion gaming market,³⁰ Las Vegas continues to expand its revenue and visitation. The first chart below shows four years of visitation by region of origin. Despite the growth in California gaming, Las Vegas continues to maintain its market share from the West – all while growing gross gaming revenue by 46.6 percent in the four-year period illustrated in the two following charts. In 2007, overall visitation to Las Vegas was 39.2 million, up from 38.9 million in 2006 and 38.6 million in 2005.³¹

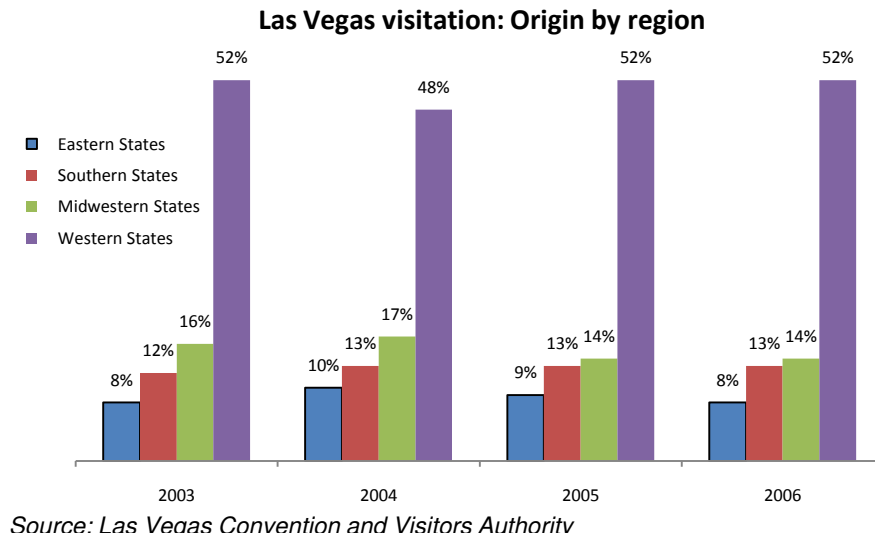
²⁷ "The State of the Indian Gaming Industry," Analysis Group, 2007-2008 edition

²⁸ *Gaming Industry Observer*, various issues, Spectrum Gaming Group estimates. This comports with South Jersey Transportation Authority estimates, as cited later in the report.

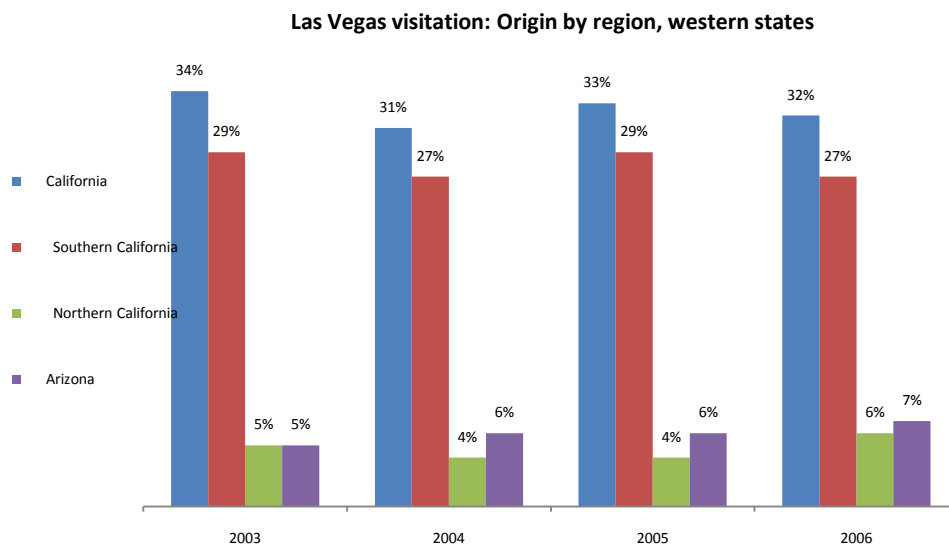
²⁹ U.S. Census

³⁰ "The State of the Indian Gaming Industry," Analysis Group, 2007-2008 edition

³¹ Las Vegas Convention and Visitors Authority



The next chart breaks down the Western region by state, and by section of California. Clearly, the destination casinos in Las Vegas are maintaining their draw in the California market, despite the growth of gaming there.



Source: Las Vegas Convention and Visitors Authority

An examination of Las Vegas, however, begs the question whether the lessons are limited insofar as other resort destinations – whether or not they offer casinos – could seriously emulate its experience. To some degree, they cannot – as Las Vegas has developed a critical mass of luxury destinations in a low-tax gaming market that effectively makes it immune to competition. In another sense, however, the lessons are clear and transferable: Destinations that target leisure spending overall will outperform markets that simply target gaming revenue, and will be less vulnerable to competition.

Public policy implications: hubs vs. spokes

Spectrum recognizes that the debate within Massachusetts in recent months has included legislative suggestions for gaming that would range from installing slot machines at racetracks to three casino destinations. This debate essentially translates into the question: Does Massachusetts seek to develop a hub or spoke gaming industry?

Our experience over recent decades leads us to conclude that developing destination resorts is far more likely to advance public policy on a variety of fronts:

- Destinations generate greater capital investment, which translates into more construction jobs.
- Because they deploy a much greater level of capital, destinations are better positioned to attract third-party retailers, restaurateurs and other attractions that can be leveraged to create a more enjoyable visitor experience.
- Destinations operate under a different business model that is designed to attract a wider variety of adults, reaching more affluent adults and targeting a much broader geographic area.
- Destinations are more likely to withstand competition from other states.
- Perhaps most important, destinations will employ far more individuals.

Those differences can be graphically illustrated in the following table, which shows the actual employment data from six properties, both the racinos and one stand-alone slot casinos (Mount Airy Lodge), that were operational in Pennsylvania in the first quarter of 2008:

Pennsylvania casinos	Operations Jobs
Presque Isle Downs	867
Hollywood Casino at Penn National	983
Harrah's Chester	1,093
Philadelphia Park*	560
The Meadows*	478
Mohegan Sun at Pocono Downs*	669
Mount Airy Lodge	950
Total	5,600

** Temporary facility / Source: Pennsylvania Gaming Control Board, as of April 30, 2008*

Note that, even under our conservative scenario, it would take more than four average spoke properties, as defined by the Pennsylvania model, to employ as many individuals as one destination casino.

Michael E. Porter of Harvard University, in a recent analysis of how various industries compete, pointed out that price competition and rivalry often intensify as industries mature – but there are exceptions. He writes: “For example, there has been enormous competitive activity in the U.S. casino industry in recent decades, but most of it has been positive-sum competition directed toward new niches and geographic segments (such as riverboats, trophy properties,

Native American reservations, international expansion and novel customer groups like families). Head-to-head rivalry that lowers prices or boosts the payouts to winners has been limited³².”

We respectfully add to Porter’s observation that destination casinos are far better equipped to target niches, largely because lower tax rates and a more comprehensive business model allow them to add amenities and meet the needs of these niches. In our observation, for example, we note that – for the most part – the larger casino destinations on the Las Vegas Strip tend to compete on the quality and breadth of their amenities, rather than on such price points as the payout percentage of their slot machines or by offering free buffets.

The argument that destinations would be more likely to advance public policy is confirmed by other surveys. Vertis Communications, a Baltimore-based organization that assists companies in various industries better target their direct-mail and other advertising messages, surveyed 2,000 consumers in 2007. Overall, about 20 percent of the adult population visited a destination-type property in the preceding 12 months, with the average adult visiting 4.3 times. The “loyalist,” however, visited such hubs an average of six times. According to Scott Marden, director of marketing research for Vertis,³³ “loyalists” are characterized as the “most traditional (segment).” They tend to be a bit older, and their numbers would include more retirees and empty nesters. The Vertis survey was not limited to casino customers.

The table below shows that the upside potential of destination resorts could be significant, as only one in five adults have visited a destination resort:

In the past 12 months, how many times have you visited a casino in a major destination such as Atlantic City or Las Vegas?

	Total Adults	M18-24	M25-34	M35-49	M50-64	M65+	W18-24	W25-34	W35-49	W50-64	W65+
0	80%	85%	80%	76%	72%	81%	78%	81%	83%	80%	86%
1 +	20%	15%	20%	24%	28%	19%	22%	19%	17%	20%	14%
1	10%	5%	11%	12%	16%	7%	9%	10%	9%	10%	9%
2	3%	1%	4%	4%	5%	2%	5%	3%	4%	3%	2%
3 +	7%	9%	5%	7%	7%	11%	8%	6%	4%	8%	4%
3	2%	2%	1%	2%	3%	3%	2%	1%	0%	2%	2%
4	1%	3%	0%	1%	1%	1%	2%	1%	1%	2%	1%
5	1%	1%	0%	0%	1%	2%	1%	3%	0%	1%	1%
6-10	1%	2%	1%	2%	0%	1%	2%	1%	1%	1%	1%
11-20	1%	2%	3%	1%	0%	1%	1%	1%	0%	0%	0%
21+	1%	0%	0%	1%	1%	3%	0%	1%	0%	1%	0%

Source: Vertis Communications

We then compared that table with another based on the frequency of visitation to local casinos. Clearly, greater accessibility generates greater visitation:

³² “The Five Competitive Forces that Shape Strategy,” by Michael E. Porter, *Harvard Business Review*, January 2008, p. 88

³³ *Gaming Industry Observer*, vol. 12, no. 16, p. 1

In the past 12 months, how many times have you visited a casino in your local area?

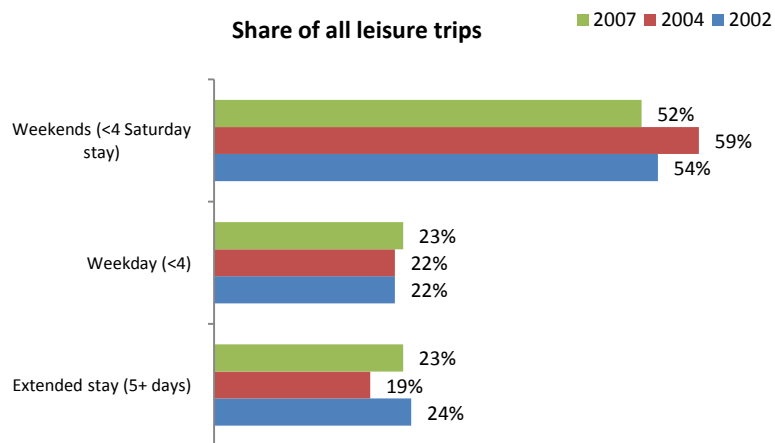
	Total Adults	M18-24	M25-34	M35-49	M50-64	M65+	W18-24	W25-34	W35-49	W50-64	W65+
0	73%	76%	74%	70%	70%	73%	76%	72%	77%	68%	76%
1 +	27%	24%	26%	30%	30%	27%	24%	28%	23%	32%	24%
1	10%	7%	8%	11%	10%	6%	7%	12%	9%	13%	9%
2	6%	4%	6%	5%	5%	8%	5%	6%	8%	5%	4%
3 +	12%	13%	11%	15%	15%	13%	11%	11%	6%	14%	11%
3	3%	4%	4%	5%	4%	2%	2%	3%	2%	3%	3%
4	1%	1%	0%	1%	3%	1%	1%	1%	0%	1%	1%
5	2%	1%	1%	3%	1%	3%	3%	4%	0%	3%	2%
6-10	3%	4%	5%	4%	3%	3%	2%	3%	2%	3%	3%
11-20	1%	4%	1%	1%	1%	2%	1%	1%	0%	1%	1%
21+	1%	0%	0%	1%	2%	2%	1%	1%	1%	2%	2%

Source: Vertis Communications

Notably, the Vertis survey appears to comport closely with other surveys that attempt to delineate the percentage of the population that would participate in casino gambling, as noted in more detail in the next section.

Travel and leisure trends

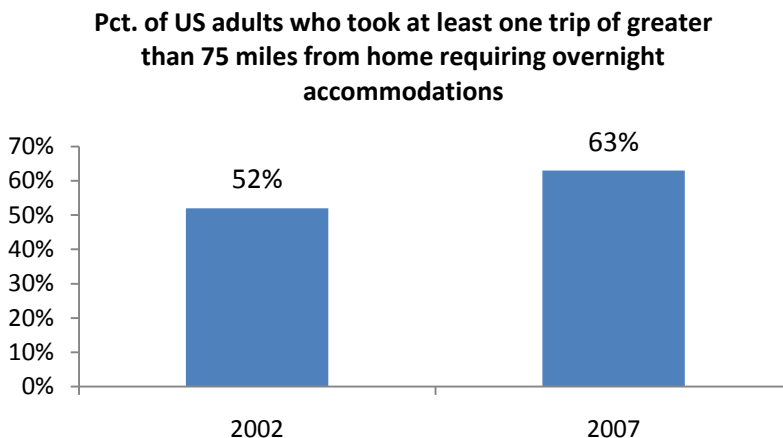
This section of the analysis shines a light on various trends in travel and leisure that could affect the potential success of destination resorts in Massachusetts. Depending on the location and the seasonality, we expect that destination resorts in Massachusetts will target some combination of extended stay, as well as some of shorter duration. For example, off-season occupancy anywhere in the Commonwealth would likely be shorter stays, as would conventions and meetings business. Seasonal demand – such as the potential to add vacationers in the Boston area – would also be to take advantage of the extended stay market.



Source: Ypartnership

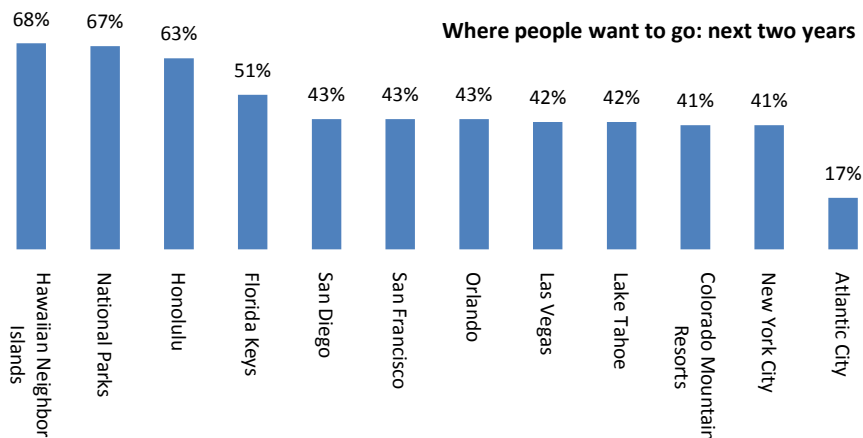
The above chart shows that over the past six years, the majority of leisure trips has been of short duration while the vacation of five-plus days has accounted for less than one-fourth of all leisure trips. Overall, we expect that hybrid or regional hubs would focus more on the stays of shorter duration, as well as mid-week. This effectively bodes well for the prospect of three destination casinos in Massachusetts.

The next chart, from 2007 – which makes no distinction between business and leisure travel – shows an increased demand for overnight accommodations.



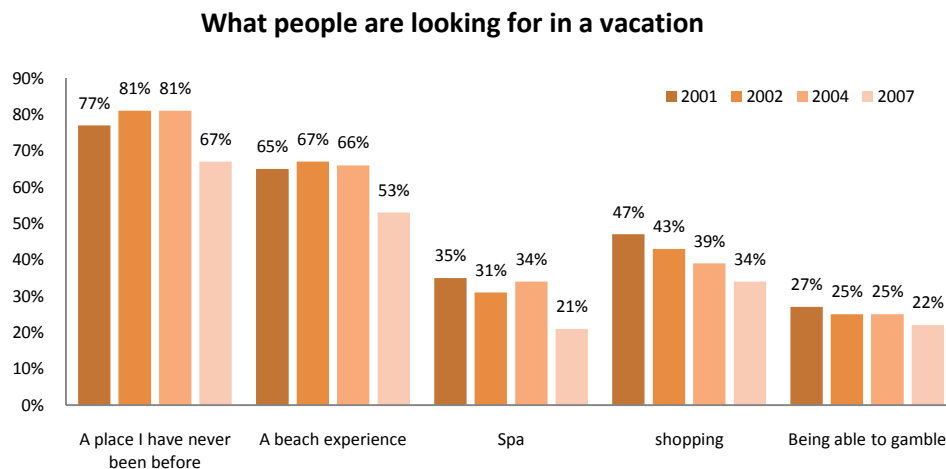
Source: Ypartnership

While more people are venturing farther from home, the list of desired destinations runs the gamut from destination resorts (mostly without gaming) to urban centers, as shown in the following 2007 chart:



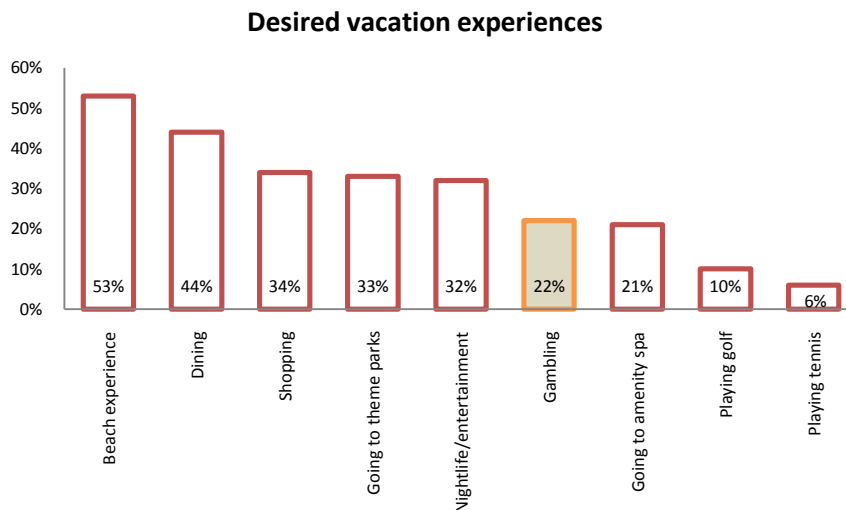
Source: Ypartnership

To better understand that trend, the following chart examines what adults are looking to do while vacationing, and charts those desires since the beginning of the decade.



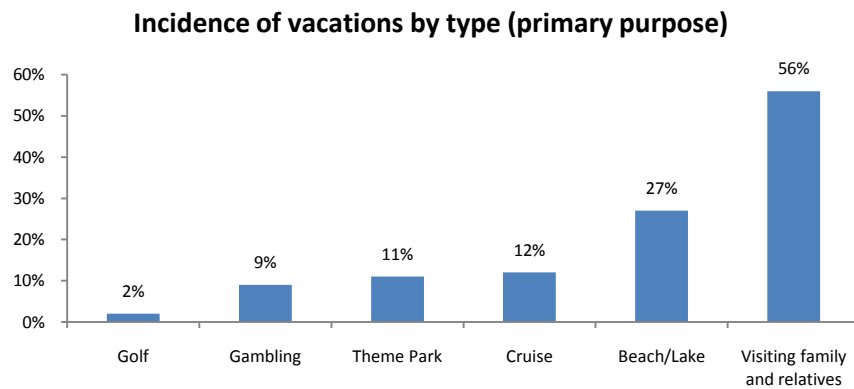
Source: Ypartnership

Related to that chart, the following tracks the desired experiences in a hierarchy, with gambling near the tail end:



Source: Ypartnership

With only one out of five adults selecting gambling as a desired vacation experience, the next 2007 chart confirms that gambling is the primary purpose behind very few vacations (less than 10 percent):



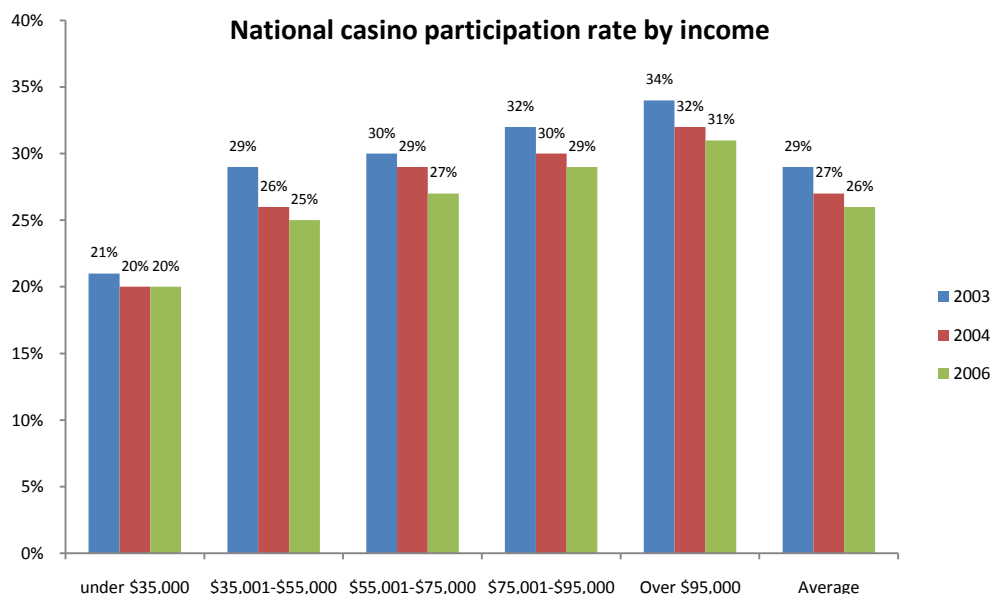
Source: Ypartnership

Incidence of gambling among adults

The next part of our analysis looks at the percentage of adults who participate in gambling as a leisure activity. The Harrah's Entertainment annual survey, for example, reports that: "A quarter of Americans age 21 and older – 52.8 million – gambled at a casino in 2005, according to the 2006 Survey. On average, gamblers visited a casino about six times during the year. Gamblers made 322 million trips to casinos in 2005."³⁴

The next chart shows three surveys taken over a span of four years that shows casino participation rates by income:

³⁴ Profile of an American Gambler: Survey 2006, Harrah's Entertainment

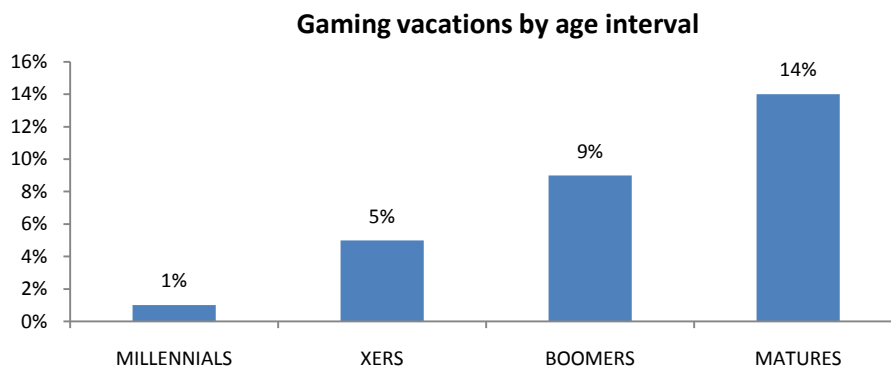


Source: Harrah's Annual Survey

The chart shows a slight decline in participation across all income levels. Yet, it is arguably much more significant that the greater participation rates can be found at higher income levels.

The following chart shows gaming vacations by adults in various demographic groups, as defined by age:

- Matures — defined as the generation born in 1945 or earlier — clearly exhibit the largest penetration rate for gaming vacations because they have the most available time.
- Boomers were those 78 million adults born between 1946 and 1964.
- Xers, about 46 million total, were born between 1965 and 1978.
- Millennials, at least 71 million total, were born after 1978.



Source: Ypartnership

This series of surveys by Ypartnership and Harrah's Entertainment supports the notion that casinos rely on consumers with two necessary assets: available time (note that older adults tend to be more frequent visitors) and discretionary income.

The following table is from the 2006 recent Harrah's Survey, which relies on a combination of face-to-face interviews and a mail-in questionnaire. The following table shows the metropolitan areas that generate the largest number of gamblers:

Designated Market Area	Population (21+)	Participation rate	No. of gamblers
New York City	14,806,436	33%	4,886,124
Los Angeles	10,527,065	37%	3,895,014
Chicago	6,716,969	29%	1,947,921
Philadelphia	5,499,873	33%	1,814,958
San Francisco-Oakland-Santa Rosa	4,939,763	30%	1,481,929
Boston	4,506,221	26%	1,171,617
Dallas-Ft. Worth	4,408,663	20%	881,733
Washington, DC	4,311,750	17%	732,998
Phoenix	4,291,254	38%	1,630,677
Atlanta	4,076,401	15%	611,460
Houston	3,767,890	22%	828,936
Detroit	3,572,338	31%	1,107,425
Seattle-Tacoma-Bellingham	3,175,758	32%	1,016,243
Miami-Ft. Lauderdale	3,073,237	30%	921,971
Minneapolis-St. Paul	3,091,439	36%	1,112,918
Tampa-St. Petersburg-Sarasota	3,047,370	17%	518,053
Cleveland	2,788,484	23%	641,351
Sacramento-Stockton	2,731,976	40%	1,092,790
Denver	2,693,721	33%	888,928
Orlando-Daytona Beach-Melbourne	2,451,383	22%	539,304
Total	94,477,991	29%	27,722,349

Source: Harrah's Survey 2006

Note that Boston is the sixth-largest designated market area (DMA) in terms of the number of gamblers, and is only 3 percentage points less than the average of these areas, despite an absence of legal casinos within the Commonwealth. We also note that, in all metropolitan areas, the penetration rate does not exceed 40 percent, regardless of the proximity to gamblers.

Earlier Harrah's surveys provided more detail, and were similar in their conclusions. The 2002 profile reported that Massachusetts adults made 4.8 million casino visits in 2001, equating to 3.8 visits per gamblers. Nearly 80 percent of the visits that year were to Connecticut casinos. The Boston DMA had 983,000 gamblers that year, about 78 percent of the Massachusetts total.

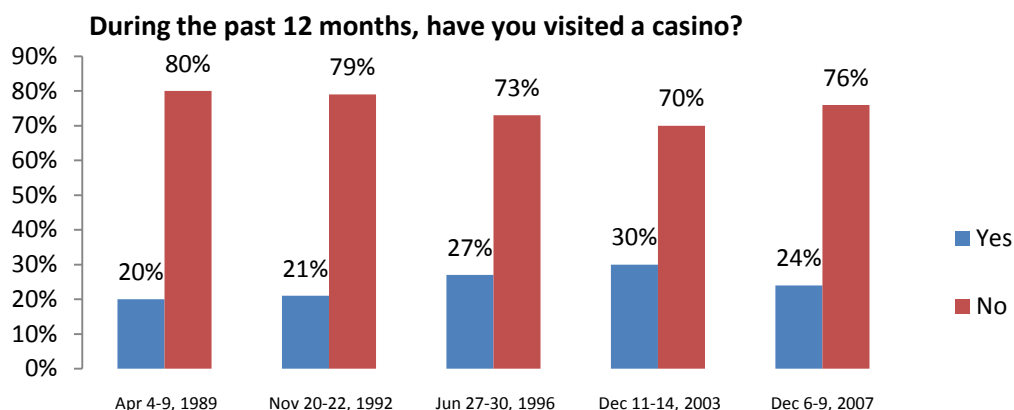
The penetration rate in the 2002 report was 27.5 percent in Massachusetts and 24.7 percent for Boston, while the national rate was 27 percent. Comparing the two surveys, the number of gamblers in the Boston area grew by 189,000 since 2001.

If the Boston area were to host one casino destination, and its penetration rate reached the 29 percent average, it would add another 135,000 active casino gamblers. If the penetration rate reached 40 percent, the increase would be approximately 631,000 additional casino gamblers. For the entire Commonwealth, the number of active casino gamblers would grow by about 175,000 additional gamblers if the penetration rate reached 29 percent.

Methodology cross-check

We cross-checked the Harrah's Survey as to the percentage of gamblers in the Boston DMA through published reports by Scarborough Research, a New York-based survey firm known for its research into such areas as the media-buying habits of adults. Scarborough reported in 2006 that 29.3 percent of adults in the Boston area visited a casino during the previous 12 months.³⁵ That is 3 points higher than the Harrah's survey, but in line with national averages.

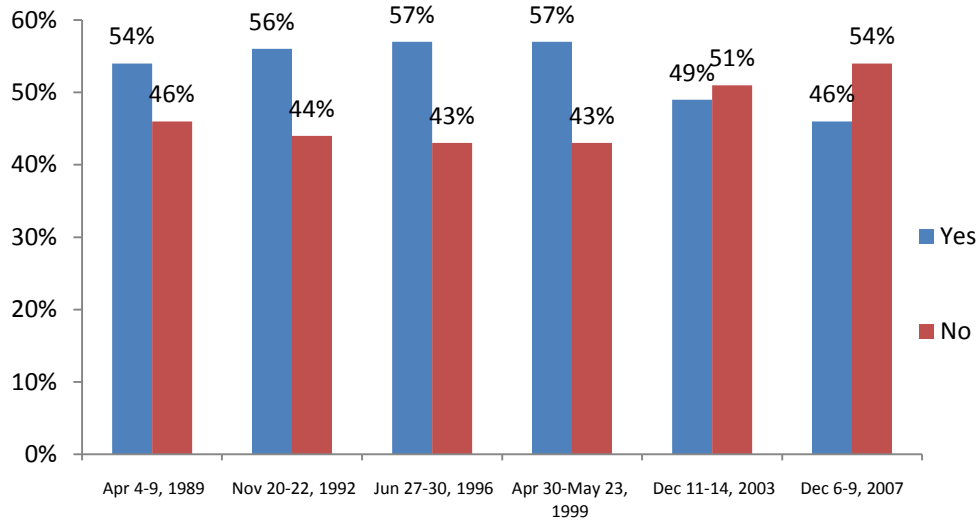
Gallup has also conducted various national gambling-related polls in recent years, which are summarized in the following tables:



Source: Gallup Poll

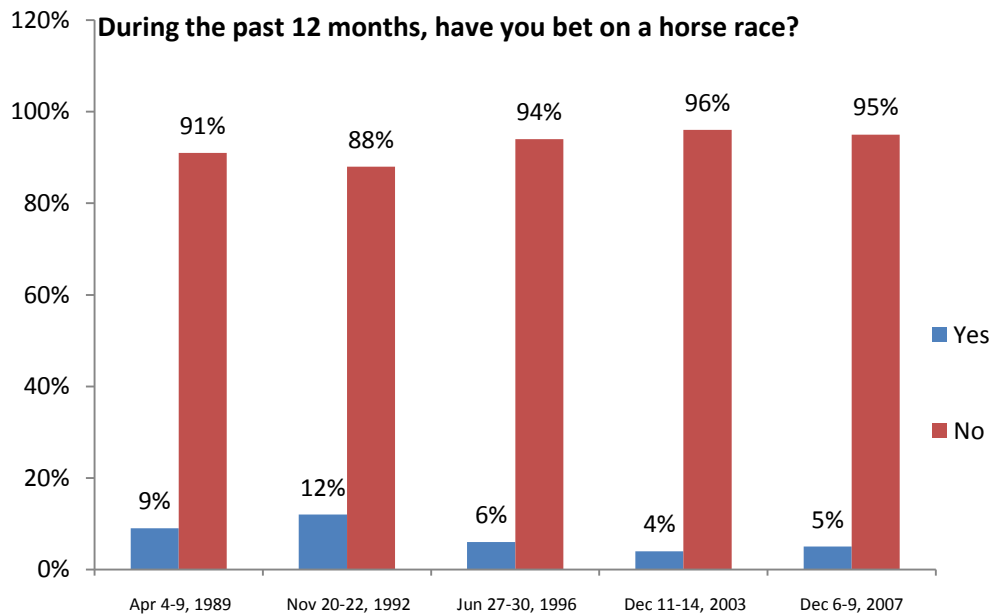
³⁵ <http://www.clearchanneloutdoor.com/markets/boston.htm>

In the past 12 months, have you bought a state lottery ticket?



Source: Gallup Poll

During the past 12 months, have you bet on a horse race?



Source: Gallup Poll

The Gallup surveys demonstrate consistency over time, and consistency with other surveys.

The demographic data, including the various surveys that we have analyzed, indicate cause for both optimism and caution for Massachusetts. Optimism can be grounded in the conclusion that many Massachusetts residents are already participating in casino gambling, and can be expected to repatriate a significant portion of that spending to local casinos. At the same

time, however, it is clear that adding casinos will not significantly increase visitation to Massachusetts from out-of-state visitors.

The expansion of casinos to more locations, both domestically and internationally, has reduced the allure of casinos as unique attractions. Therefore, we suggest that any casinos developed in Massachusetts must coordinate their marketing efforts closely with existing tourism businesses. Casinos can complement existing attractions, add perceived value to tourists and business travelers who are considering Massachusetts as a destination, and help attract incremental capital investment for the tourism industry. However, it would be unrealistic to expect casinos to become lures for gaming-oriented tourists who already enjoy numerous gambling options.

Leisure and hospitality: New England trends

Any understanding of how destination casinos could be integrated into the existing hospitality industry in Massachusetts must be based on an analysis of:

- Gaming's existing role nationwide within leisure and hospitality.
- Massachusetts's existing role within the New England and national hospitality industries.

As our analysis is rooted in the premise that destination casinos must be fully integrated into the tourism industry in order to best advance public policy, we are examining long-term trends in this industry to determine how the industry in Massachusetts might be impacted by the introduction of destination casinos.

Commercial casinos throughout the United States directly employ about 361,000 people,³⁶ while the total employment within the leisure and hospitality industries exceeds 13.6 million.³⁷ Those numbers, however, need further amplification.

The commercial casino industry does not include most Indian casinos – unless they operate under commercial licenses issued by states – or racinos where the slot machines are operated by state lotteries, which is the case in such states as Rhode Island, West Virginia, New York and Delaware. Indeed, the employment numbers would be much greater if all forms of gaming were taken into account. Racetrack casinos employ about 27,000 people.³⁸

The following tables show that Massachusetts is already host to a vibrant tourism industry that is the clear leader in New England. However, the tables also show that employment in hospitality and leisure has been relatively static in Massachusetts. The next tables examine leisure and hospitality employment data, both seasonally adjusted and non-seasonally adjusted over a span of more than a decade:

³⁶ American Gaming Association. State of the States 2008

³⁷ U.S. Bureau of Labor Statistics

³⁸ American Gaming Association. State of the States 2008

Total employment, hospitality and leisure industries (in thousands) seasonally adjusted

Date	US	NE	CT	ME	MA	NH	RI	CT
Jan-97	10,921	545.7	113.5	51.3	256.1	52.7	40.6	31.5
Feb-97	10,952	545.3	113.4	51.1	255.8	52.6	41.0	31.4
Mar-97	10,968	546.2	113.7	51.2	256.5	52.7	41.2	30.9
Apr-97	10,984	545.1	113.4	51.3	255.5	52.2	41.0	31.7
May-97	11,015	549.4	113.9	51.7	257.2	53.7	41.1	31.8
Jun-97	11,029	550.6	114.7	51.6	257.4	54.0	40.9	32.0
Jul-97	11,016	547.5	112.9	51.8	255.4	53.7	41.4	32.3
Aug-97	11,030	550.8	113.4	51.9	257.7	54.4	41.5	31.9
Sep-97	11,059	553.9	114.9	52.1	258.3	54.8	41.6	32.2
Oct-97	11,062	555.2	114.9	52.3	259.2	54.7	41.7	32.4
Nov-97	11,074	555.8	115.1	52.5	260.0	54.5	41.6	32.1
Dec-97	11,087	558.2	115.4	53.3	261.1	54.6	41.7	32.1
Jan-98	11,100	555.6	116.2	52.4	259.4	54.2	41.5	31.9
Feb-98	11,123	559.0	116.4	53.1	261.5	54.5	41.5	32.0
Mar-98	11,134	558.5	116.8	53.2	260.8	54.6	41.2	31.9
Apr-98	11,156	558.6	115.3	53.2	261.4	54.6	41.8	32.3
May-98	11,213	562.0	116.7	53.7	261.9	55.3	41.9	32.5
Jun-98	11,215	559.7	116.4	53.1	261.5	54.7	42.0	32.0
Jul-98	11,248	561.8	116.6	52.7	263.1	55.4	42.1	31.9
Aug-98	11,273	564.2	117.2	53.1	264.2	55.4	42.3	32.0
Sep-98	11,311	568.1	117.7	53.8	265.4	56.1	42.6	32.5
Oct-98	11,298	563.7	116.8	53.1	263.9	55.9	41.7	32.3
Nov-98	11,337	566.7	117.5	53.5	264.9	56.2	42.2	32.4
Dec-98	11,376	567.9	118.1	53.9	266.0	56.4	42.1	31.4
Jan-99	11,385	568.7	117.5	53.3	267.0	56.6	42.3	32.0
Feb-99	11,425	571.7	118.5	53.8	267.4	57.0	42.7	32.3
Mar-99	11,443	570.4	118.5	53.7	267.0	56.8	42.3	32.1
Apr-99	11,478	578.9	119.5	54.1	272.9	56.1	43.8	32.5
May-99	11,506	577.3	119.3	54.3	270.8	56.3	44.0	32.6
Jun-99	11,539	578.5	119.9	54.0	271.3	56.5	44.4	32.4
Jul-99	11,546	578.4	120.4	53.8	270.4	57.0	44.1	32.7
Aug-99	11,567	579.4	120.3	54.2	270.4	57.3	44.4	32.8
Sep-99	11,597	580.8	120.4	54.5	271.2	57.5	44.5	32.7
Oct-99	11,648	586.6	120.6	56.7	272.8	58.1	45.3	33.1
Nov-99	11,682	582.9	120.5	54.3	272.5	57.1	45.3	33.2
Dec-99	11,706	580.8	120.6	54.2	271.8	56.8	45.8	31.6
Jan-00	11,713	584.2	120.5	55.2	271.9	57.3	46.4	32.9
Feb-00	11,719	584.9	120.5	55.4	272.3	57.7	46.0	33.0
Mar-00	11,788	586.9	121.0	55.9	272.8	57.9	46.3	33.0
Apr-00	11,834	585.4	120.1	55.5	274.6	58.1	45.9	31.2
May-00	11,827	582.7	119.6	55.5	271.3	57.9	45.7	32.7

Total employment, hospitality and leisure industries (in thousands) seasonally adjusted

Date	US	NE	CT	ME	MA	NH	RI	CT
Jun-00	11,869	589.0	121.3	56.1	273.6	58.4	46.2	33.4
Jul-00	11,900	590.6	120.9	56.2	275.4	58.7	46.5	32.9
Aug-00	11,927	589.2	120.9	56.1	274.7	58.3	46.3	32.9
Sep-00	11,940	590.7	121.7	55.9	275.4	58.5	46.0	33.2
Oct-00	11,876	593.1	121.9	56.5	276.7	58.6	46.3	33.1
Nov-00	11,946	594.8	122.2	56.2	277.8	58.7	46.9	33.0
Dec-00	11,976	596.3	122.5	56.1	278.2	58.9	46.8	33.8
Jan-01	11,977	595.6	119.6	56.6	279.8	59.4	46.5	33.7
Feb-01	11,997	595.8	119.6	56.0	280.8	59.5	46.6	33.3
Mar-01	12,000	596.0	119.7	56.2	281.0	59.2	46.7	33.2
Apr-01	12,040	594.4	117.8	57.0	278.8	59.7	47.0	34.1
May-01	12,068	594.8	119.6	56.4	279.2	59.8	47.0	32.8
Jun-01	12,076	597.7	119.5	56.8	281.7	59.8	47.0	32.9
Jul-01	12,110	595.4	119.6	56.8	279.8	59.4	46.8	33.0
Aug-01	12,093	596.3	120.1	56.9	280.0	59.3	47.0	33.0
Sep-01	12,061	592.6	118.9	56.5	278.5	59.0	47.1	32.6
Oct-01	12,015	592.2	119.8	56.4	277.1	59.5	46.8	32.6
Nov-01	11,985	594.0	119.9	56.5	278.1	59.9	46.7	32.9
Dec-01	11,967	590.5	120.2	55.2	278.3	59.4	46.8	30.6
Jan-02	12,006	597.3	121.5	56.5	279.4	59.7	47.1	33.1
Feb-02	11,962	598.9	121.8	56.6	280.3	59.8	47.3	33.1
Mar-02	11,965	603.3	122.1	57.2	282.7	60.5	47.9	32.9
Apr-02	11,928	605.9	122.9	57.0	283.5	61.0	48.2	33.3
May-02	11,936	607.1	123.0	57.2	284.7	61.0	48.2	33.0
Jun-02	11,905	607.2	123.1	57.1	285.1	60.7	48.0	33.2
Jul-02	11,912	607.3	123.1	57.5	285.0	60.8	48.2	32.7
Aug-02	11,936	608.4	122.9	57.5	286.0	61.0	48.2	32.8
Sep-02	11,991	608.5	122.8	57.6	286.4	60.8	48.1	32.8
Oct-02	12,070	612.0	123.7	58.2	287.4	61.5	48.3	32.9
Nov-02	12,109	611.2	123.3	57.0	287.8	61.9	48.3	32.9
Dec-02	12,112	613.2	123.4	57.8	289.3	61.3	47.8	33.6
Jan-03	12,176	613.2	123.4	58.2	288.2	61.2	48.9	33.3
Feb-03	12,132	610.9	123.6	58.2	286.7	61.0	48.5	32.9
Mar-03	12,113	610.0	123.7	58.2	285.9	60.6	48.6	33.0
Apr-03	12,087	605.6	123.4	57.6	283.5	60.4	48.7	32.0
May-03	12,092	614.0	124.4	58.4	287.8	61.8	48.9	32.7
Jun-03	12,115	610.7	124.5	58.0	286.9	60.7	48.3	32.3
Jul-03	12,145	614.8	125.6	58.6	287.4	61.3	49.4	32.5
Aug-03	12,164	616.7	125.8	58.7	288.2	62.0	49.2	32.8
Sep-03	12,195	617.3	126.2	58.3	288.7	61.9	49.3	32.9
Oct-03	12,245	620.3	127.0	58.8	289.9	62.3	49.4	32.9

Total employment, hospitality and leisure industries (in thousands) seasonally adjusted

Date	US	NE	CT	ME	MA	NH	RI	CT
Nov-03	12,284	620.1	127.1	59.1	289.4	62.1	49.4	33.0
Dec-03	12,333	618.7	126.6	58.9	288.4	62.7	49.3	32.8
Jan-04	12,360	619.4	126.8	58.4	289.5	62.6	49.2	32.9
Feb-04	12,377	619.9	126.8	58.7	289.1	63.0	49.2	33.1
Mar-04	12,421	619.4	126.6	58.4	289.6	63.1	48.9	32.8
Apr-04	12,433	620.2	126.6	58.5	290.3	63.2	49.3	32.3
May-04	12,485	622.5	127.0	58.6	290.4	63.7	49.7	33.1
Jun-04	12,495	622.8	127.3	58.9	290.1	63.5	49.7	33.3
Jul-04	12,495	626.2	127.6	58.6	292.6	63.9	50.0	33.5
Aug-04	12,492	625.5	127.9	58.9	291.1	64.1	50.1	33.4
Sep-04	12,553	628.1	129.1	59.3	291.4	64.5	50.3	33.5
Oct-04	12,577	627.2	128.3	58.9	291.7	64.4	50.4	33.5
Nov-04	12,609	627.1	128.1	59.2	291.9	64.5	50.4	33.0
Dec-04	12,638	627.5	128.6	59.2	292.2	64.3	50.6	32.6
Jan-05	12,666	625.3	128.0	59.1	291.3	63.4	50.4	33.1
Feb-05	12,696	627.3	128.9	59.0	292.4	63.3	50.7	33.0
Mar-05	12,712	625.9	128.9	58.8	291.5	63.1	50.4	33.2
Apr-05	12,780	630.1	129.8	59.2	293.4	63.8	50.4	33.5
May-05	12,801	627.6	129.6	59.0	292.5	63.2	50.1	33.2
Jun-05	12,837	627.8	129.6	59.0	292.7	63.2	50.3	33.0
Jul-05	12,859	628.8	129.1	59.3	293.0	63.9	50.1	33.4
Aug-05	12,888	627.8	129.7	59.3	292.9	62.8	50.0	33.1
Sep-05	12,871	628.7	129.9	59.1	293.4	63.2	50.1	33.0
Oct-05	12,847	625.3	129.4	59.3	290.9	62.7	50.1	32.9
Nov-05	12,896	629.5	130.2	59.4	293.4	63.0	50.2	33.3
Dec-05	12,918	631.7	130.3	60.2	293.5	63.8	50.2	33.7
Jan-06	12,938	631.3	131.2	59.5	293.9	63.4	50.2	33.1
Feb-06	12,973	631.3	131.2	59.5	294.4	63.4	49.7	33.1
Mar-06	13,028	634.4	132.3	59.9	294.8	63.8	50.3	33.3
Apr-06	13,058	632.5	131.5	59.8	294.7	63.0	50.3	33.2
May-06	13,045	630.8	131.7	59.5	293.3	62.5	49.9	33.9
Jun-06	13,057	635.8	132.3	60.4	295.2	63.5	50.2	34.2
Jul-06	13,127	634.1	132.2	59.4	295.6	64.2	49.9	32.8
Aug-06	13,159	635.3	132.5	59.4	296.1	63.9	50.2	33.2
Sep-06	13,166	636.4	132.7	59.6	295.7	64.7	50.6	33.1
Oct-06	13,202	633.9	132.7	59.3	293.8	64.1	51.0	33.0
Nov-06	13,247	635.0	132.9	59.8	294.5	64.0	50.7	33.1
Dec-06	13,288	637.0	133.1	60.5	295.0	64.1	50.8	33.5
Jan-07	13,306	636.1	134.8	60.0	294.4	63.9	50.0	33.0
Feb-07	13,331	636.9	135.0	60.0	294.9	63.8	50.1	33.1
Mar-07	13,351	639.5	135.8	60.3	295.6	64.0	50.3	33.5
Apr-07	13,375	642.2	135.6	60.6	297.3	63.8	51.0	33.9

Total employment, hospitality and leisure industries (in thousands) seasonally adjusted

Date	US	NE	CT	ME	MA	NH	RI	CT
May-07	13,428	638.5	134.6	59.5	296.0	63.2	51.0	34.2
Jun-07	13,461	645.9	135.8	61.0	298.6	64.8	51.3	34.4
Jul-07	13,476	643.5	135.3	59.7	299.3	65.2	51.0	33.0
Aug-07	13,494	645.9	135.2	59.6	300.8	65.9	51.1	33.3
Sep-07	13,552	646.9	135.5	59.8	300.4	66.2	51.8	33.2
Oct-07	13,604	642.9	135.3	59.7	298.4	64.3	51.9	33.3
Nov-07	13,628	644.6	135.3	60.1	300.1	64.0	51.6	33.5
Dec-07	13,650	645.8	135.1	60.9	300.7	63.8	51.6	33.7

Source: U.S. Bureau of Labor Statistics

We then examined the region by share of total leisure and hospitality employment:

Share by state: New England leisure and hospitality employment (not seasonally adjusted)

	CT	ME	MA	NH	RI	VT
Jan-97	21.2%	8.5%	46.7%	9.6%	7.2%	6.7%
Feb-97	21.1%	8.4%	46.8%	9.6%	7.4%	6.7%
Mar-97	21.2%	8.5%	47.0%	9.5%	7.4%	6.4%
Apr-97	21.3%	8.9%	47.4%	9.2%	7.5%	5.6%
May-97	21.0%	9.5%	47.3%	9.5%	7.6%	5.2%
Jun-97	20.6%	10.0%	46.7%	9.9%	7.6%	5.3%
Jul-97	20.0%	10.7%	45.8%	10.4%	7.6%	5.5%
Aug-97	19.8%	10.7%	45.9%	10.5%	7.5%	5.5%
Sep-97	20.2%	10.1%	46.5%	10.1%	7.6%	5.6%
Oct-97	20.4%	9.5%	47.2%	9.7%	7.5%	5.7%
Nov-97	21.1%	8.9%	47.6%	9.3%	7.6%	5.4%
Dec-97	21.2%	8.7%	47.0%	9.5%	7.5%	6.2%
Jan-98	21.3%	8.5%	46.5%	9.7%	7.3%	6.7%
Feb-98	21.1%	8.6%	46.7%	9.7%	7.3%	6.7%
Mar-98	21.3%	8.6%	46.8%	9.6%	7.2%	6.5%
Apr-98	21.2%	9.0%	47.3%	9.4%	7.5%	5.6%
May-98	21.0%	9.6%	47.1%	9.6%	7.5%	5.2%
Jun-98	20.6%	10.1%	46.6%	9.9%	7.6%	5.2%
Jul-98	20.2%	10.6%	46.0%	10.4%	7.5%	5.3%
Aug-98	20.0%	10.7%	45.9%	10.4%	7.5%	5.4%
Sep-98	20.2%	10.2%	46.6%	10.0%	7.6%	5.5%
Oct-98	20.5%	9.4%	47.3%	9.8%	7.4%	5.6%
Nov-98	21.1%	8.9%	47.6%	9.5%	7.6%	5.4%
Dec-98	21.3%	8.7%	47.0%	9.7%	7.4%	5.9%
Jan-99	21.0%	8.5%	46.7%	10.0%	7.2%	6.6%
Feb-99	21.0%	8.5%	46.6%	10.0%	7.3%	6.6%
Mar-99	21.1%	8.5%	46.9%	9.8%	7.3%	6.4%

Share by state: New England leisure and hospitality employment (not seasonally adjusted)

	CT	ME	MA	NH	RI	VT
Apr-99	21.2%	8.9%	47.7%	9.3%	7.6%	5.4%
May-99	20.9%	9.5%	47.4%	9.5%	7.7%	5.0%
Jun-99	20.5%	9.9%	46.8%	9.9%	7.8%	5.1%
Jul-99	20.2%	10.6%	45.9%	10.4%	7.6%	5.3%
Aug-99	20.0%	10.6%	45.8%	10.5%	7.7%	5.4%
Sep-99	20.2%	10.1%	46.6%	10.0%	7.7%	5.4%
Oct-99	20.3%	9.7%	47.0%	9.8%	7.8%	5.5%
Nov-99	21.1%	8.7%	47.6%	9.4%	7.9%	5.4%
Dec-99	21.3%	8.6%	47.0%	9.5%	7.9%	5.8%
Jan-00	21.0%	8.5%	46.3%	9.8%	7.7%	6.6%
Feb-00	20.9%	8.5%	46.4%	9.9%	7.7%	6.6%
Mar-00	21.0%	8.6%	46.6%	9.8%	7.7%	6.4%
Apr-00	21.0%	9.0%	47.4%	9.6%	7.9%	5.1%
May-00	20.8%	9.6%	47.0%	9.7%	8.0%	5.0%
Jun-00	20.4%	10.1%	46.3%	10.0%	8.0%	5.2%
Jul-00	19.9%	10.8%	45.8%	10.5%	7.9%	5.2%
Aug-00	19.8%	10.8%	45.8%	10.4%	7.9%	5.3%
Sep-00	20.1%	10.2%	46.5%	10.0%	7.9%	5.4%
Oct-00	20.3%	9.5%	47.1%	9.7%	7.8%	5.4%
Nov-00	20.9%	8.9%	47.5%	9.5%	8.0%	5.2%
Dec-00	21.0%	8.6%	46.8%	9.6%	7.8%	6.1%
Jan-01	20.4%	8.6%	46.8%	10.0%	7.6%	6.6%
Feb-01	20.3%	8.5%	47.0%	10.0%	7.6%	6.6%
Mar-01	20.4%	8.5%	47.2%	9.9%	7.6%	6.3%
Apr-01	20.3%	9.1%	47.5%	9.7%	8.0%	5.5%
May-01	20.4%	9.5%	47.4%	9.8%	8.0%	4.9%
Jun-01	19.8%	10.1%	47.0%	10.1%	8.0%	5.0%
Jul-01	19.5%	10.8%	46.1%	10.5%	7.9%	5.2%
Aug-01	19.4%	10.9%	46.1%	10.5%	7.9%	5.3%
Sep-01	19.5%	10.2%	46.9%	10.0%	8.0%	5.2%
Oct-01	20.0%	9.5%	47.3%	9.9%	7.9%	5.3%
Nov-01	20.6%	8.9%	47.6%	9.7%	8.0%	5.2%
Dec-01	20.8%	8.6%	47.3%	9.8%	7.9%	5.5%
Jan-02	20.7%	8.6%	46.6%	10.0%	7.6%	6.5%
Feb-02	20.6%	8.5%	46.6%	10.0%	7.7%	6.5%
Mar-02	20.6%	8.6%	46.9%	10.0%	7.8%	6.2%
Apr-02	20.8%	8.9%	47.4%	9.7%	8.0%	5.2%
May-02	20.5%	9.5%	47.3%	9.8%	8.1%	4.8%
Jun-02	20.0%	10.0%	46.8%	10.1%	8.0%	5.0%
Jul-02	19.7%	10.8%	46.1%	10.5%	8.0%	5.0%
Aug-02	19.5%	10.8%	46.2%	10.5%	7.9%	5.2%
Sep-02	19.7%	10.1%	47.0%	10.1%	8.0%	5.1%

Share by state: New England leisure and hospitality employment (not seasonally adjusted)

	CT	ME	MA	NH	RI	VT
Oct-02	20.0%	9.5%	47.5%	9.9%	7.9%	5.2%
Nov-02	20.6%	8.8%	47.9%	9.8%	8.0%	5.0%
Dec-02	20.6%	8.7%	47.3%	9.8%	7.8%	5.9%
Jan-03	20.5%	8.6%	46.8%	10.0%	7.7%	6.4%
Feb-03	20.5%	8.6%	46.7%	10.0%	7.8%	6.3%
Mar-03	20.6%	8.6%	46.9%	9.9%	7.8%	6.1%
Apr-03	20.9%	9.0%	47.4%	9.6%	8.1%	5.0%
May-03	20.5%	9.5%	47.3%	9.8%	8.1%	4.7%
Jun-03	20.2%	10.1%	46.8%	10.0%	8.1%	4.9%
Jul-03	19.8%	10.8%	46.0%	10.4%	8.0%	5.0%
Aug-03	19.6%	10.8%	46.0%	10.5%	8.0%	5.1%
Sep-03	19.9%	10.1%	46.7%	10.1%	8.1%	5.1%
Oct-03	20.3%	9.5%	47.2%	9.9%	8.0%	5.1%
Nov-03	20.9%	9.0%	47.4%	9.7%	8.1%	5.0%
Dec-03	20.9%	8.8%	46.7%	9.9%	8.0%	5.7%
Jan-04	20.8%	8.5%	46.5%	10.2%	7.7%	6.3%
Feb-04	20.8%	8.5%	46.4%	10.2%	7.8%	6.3%
Mar-04	20.8%	8.5%	46.7%	10.2%	7.7%	6.0%
Apr-04	20.9%	8.9%	47.4%	9.8%	8.0%	4.9%
May-04	20.7%	9.4%	47.1%	10.0%	8.1%	4.8%
Jun-04	20.2%	10.0%	46.4%	10.3%	8.1%	5.0%
Jul-04	19.8%	10.6%	46.0%	10.6%	8.0%	5.0%
Aug-04	19.7%	10.7%	45.8%	10.7%	8.0%	5.1%
Sep-04	20.0%	10.1%	46.3%	10.4%	8.1%	5.1%
Oct-04	20.3%	9.4%	47.0%	10.1%	8.1%	5.1%
Nov-04	20.8%	8.9%	47.3%	9.9%	8.2%	4.9%
Dec-04	20.9%	8.7%	46.7%	10.0%	8.1%	5.6%
Jan-05	20.8%	8.5%	46.4%	10.2%	7.8%	6.2%
Feb-05	20.9%	8.5%	46.4%	10.2%	7.9%	6.2%
Mar-05	21.0%	8.5%	46.5%	10.0%	7.9%	6.0%
Apr-05	21.1%	8.9%	47.2%	9.8%	8.1%	5.0%
May-05	20.9%	9.4%	47.0%	9.8%	8.1%	4.7%
Jun-05	20.4%	10.0%	46.4%	10.2%	8.1%	4.9%
Jul-05	19.9%	10.7%	45.9%	10.6%	8.0%	5.0%
Aug-05	19.9%	10.7%	46.0%	10.5%	7.9%	5.0%
Sep-05	20.1%	10.1%	46.6%	10.2%	8.1%	5.0%
Oct-05	20.5%	9.5%	47.0%	9.8%	8.1%	5.1%
Nov-05	21.1%	8.9%	47.4%	9.6%	8.1%	4.9%
Dec-05	21.1%	8.8%	46.6%	9.9%	7.9%	5.7%
Jan-06	21.2%	8.5%	46.4%	10.1%	7.7%	6.2%
Feb-06	21.1%	8.5%	46.4%	10.1%	7.7%	6.1%
Mar-06	21.3%	8.6%	46.4%	10.0%	7.8%	5.9%

Share by state: New England leisure and hospitality employment (not seasonally adjusted)

	CT	ME	MA	NH	RI	VT
Apr-06	21.3%	9.0%	47.2%	9.6%	8.0%	5.0%
May-06	21.2%	9.4%	46.9%	9.6%	8.0%	4.8%
Jun-06	20.6%	10.1%	46.2%	10.1%	8.0%	5.0%
Jul-06	20.2%	10.6%	46.0%	10.4%	7.9%	4.9%
Aug-06	20.1%	10.6%	46.1%	10.3%	7.9%	5.0%
Sep-06	20.4%	10.0%	46.5%	10.1%	8.1%	4.9%
Oct-06	20.8%	9.4%	46.8%	9.9%	8.1%	5.0%
Nov-06	21.3%	8.8%	47.2%	9.7%	8.1%	4.9%
Dec-06	21.3%	8.8%	46.4%	9.9%	7.9%	5.6%
Jan-07	21.5%	8.4%	46.1%	10.2%	7.7%	6.1%
Feb-07	21.5%	8.4%	46.2%	10.1%	7.7%	6.1%
Mar-07	21.6%	8.5%	46.3%	10.0%	7.7%	5.9%
Apr-07	21.6%	8.9%	46.9%	9.7%	8.0%	4.9%
May-07	21.3%	9.3%	46.7%	9.8%	8.1%	4.8%
Jun-07	20.8%	10.0%	46.0%	10.1%	8.1%	5.0%
Jul-07	20.4%	10.5%	45.8%	10.5%	7.9%	4.9%
Aug-07	20.2%	10.6%	45.8%	10.5%	8.0%	5.0%
Sep-07	20.5%	10.0%	46.3%	10.2%	8.1%	4.9%
Oct-07	20.9%	9.4%	46.9%	9.8%	8.1%	5.0%
Nov-07	21.4%	8.7%	47.3%	9.6%	8.1%	4.9%
Dec-07	21.4%	8.7%	46.7%	9.7%	8.0%	5.6%

Source: U.S. Bureau of Labor Statistics

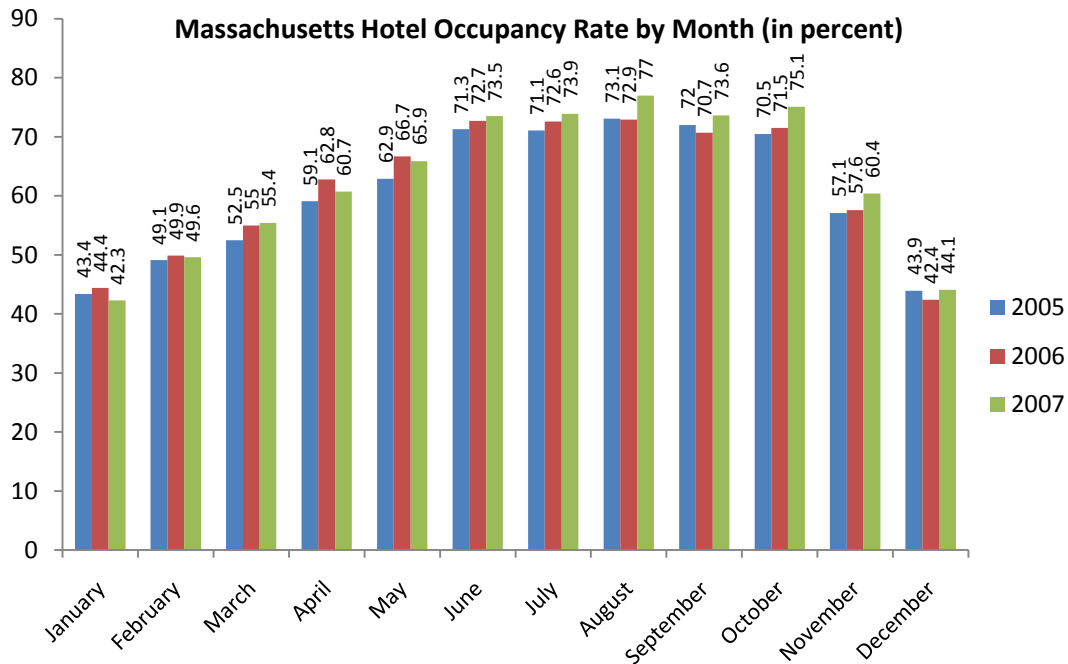
Note the remarkable consistency of Massachusetts' share of employment within the New England leisure and hospitality industry: Although there has been some minor fluctuation throughout the decade, Massachusetts accounted for precisely 46.7 percent of this industry's employment at both ends of this 10-year span.

We also examined wages and salaries within this industry, as noted in the following chart:



Massachusetts has a slightly higher share of wages and salaries within leisure and hospitality (nearly 50 percent) than it does of the number of jobs, which clearly indicates that the Commonwealth retains a healthy tourism industry that has not suffered from a lack of gaming. At the same time, Connecticut has made gaming a major centerpiece of its leisure and hospitality employment (directly accounting for about 15 percent of the industry's workforce). Even with gaming, however, Connecticut's tourism infrastructure is significantly smaller than Massachusetts'; a fact that could bode well for the success of gaming in the Commonwealth.

Additionally, we looked at hotel occupancy. The following chart demonstrates the breadth of seasonality for Massachusetts hotels, but also shows that occupancy has increased perceptibly during 2007 over previous years.



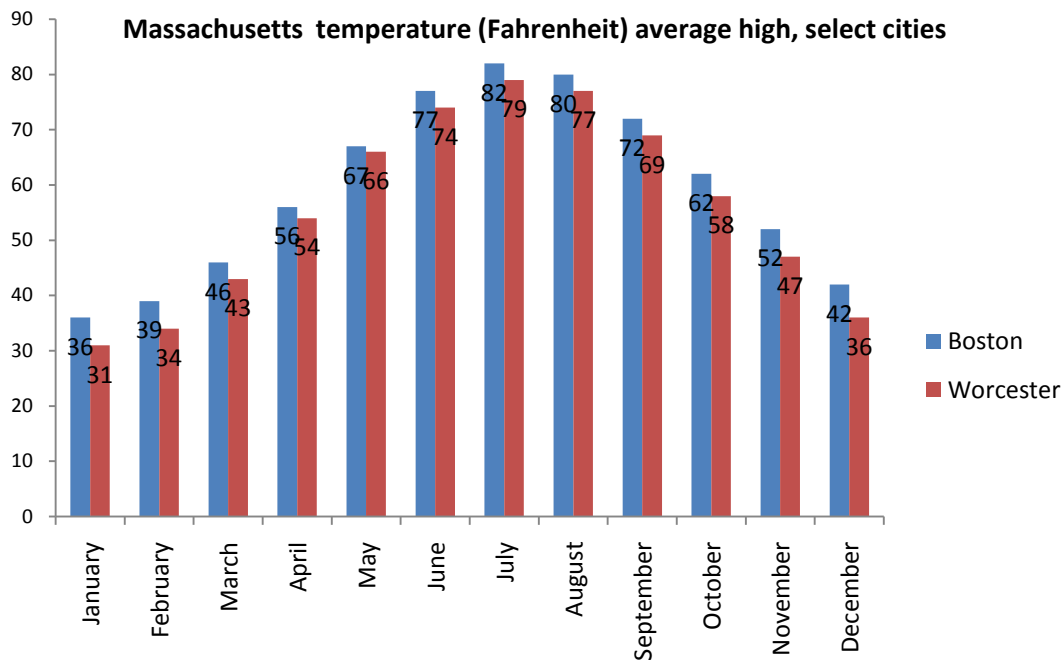
Source: Massachusetts Office of Travel & Tourism

The next step would be then to examine hotel occupancy within different regions in the Commonwealth:

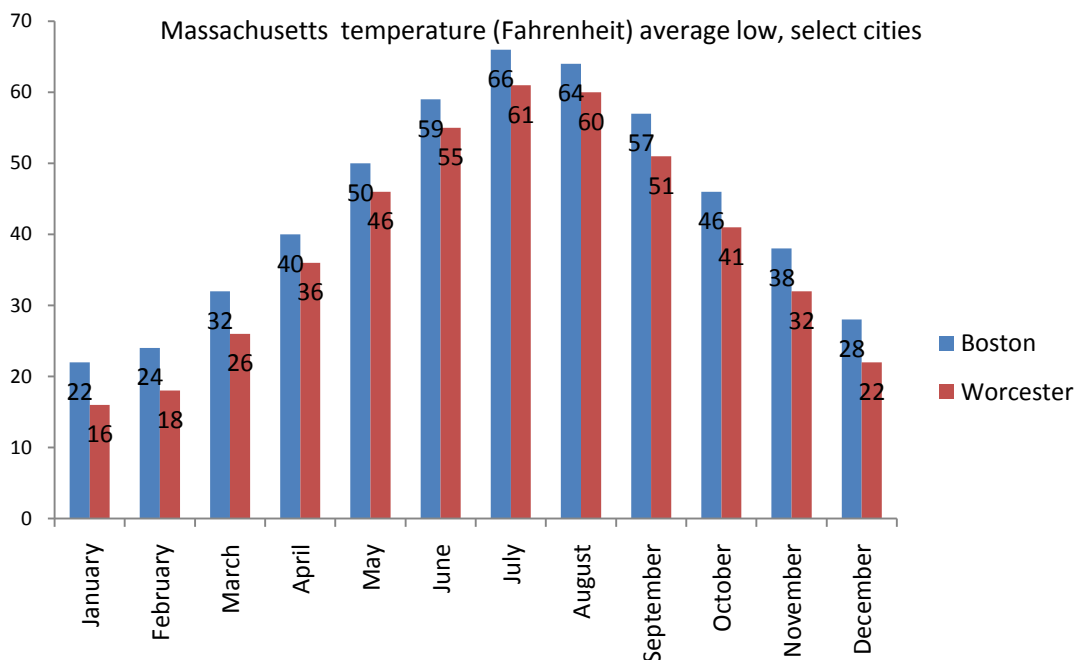
	Occupancy Rate		
	2007	2006	% Chg
United States	63.2	63.3	-0.2
Massachusetts	63.0	62.1	1.4
Barnstable County, MA	53.5	53.5	0.0
Berkshire County, MA	47.5	46.5	2.2
Bristol County, MA	51.7	53.8	-3.9
Essex County, MA	60.3	58.3	3.4
Hampden County, MA	54.0	55.0	-1.8
Hampshire County, MA	58.6	56.4	3.9
Middlesex County, MA	64.6	63.2	2.2
Norfolk County, MA	67.0	64.6	3.7
Plymouth County, MA	58.9	56.4	4.4
Suffolk County, MA	76.1	76.0	0.1
Worcester County, MA	55.4	54.2	2.2

Source: Massachusetts Office of Travel & Tourism

Seasonality is having an apparent impact on leisure and hospitality, largely due to the stark shifts in weather patterns. The following two charts examine average highs and lows in both Boston and Worcester:



Source: www.ustravelweather.com



Source: www.ustravelweather.com

Note that the variances between the average temperatures are starker than the seasonal shifts in occupancy. This is likely due to the sustainability of business travel, which should

operate independently of weather patterns. For example, Suffolk County – which would have the highest level of business travel – also exhibits the highest occupancy rates.

Seasonality is less of an issue in gaming resorts than it would be in other tourist destinations that rely on particular seasons. For example, Atlantic City is clearly not as dependent on the summer season as other New Jersey shore towns, yet seasonality still plays a role:

<i>Atlantic City automobile traffic, by month: South Jersey Transportation Authority Data</i>								
	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>Average</i>
January	1,707,387	1,937,993	1,948,775	1,912,756	1,827,175	2,015,719	1,967,799	1,902,515
February	1,689,029	1,969,819	1,710,465	2,008,456	1,894,555	1,932,387	1,829,950	1,862,094
March	1,905,696	2,171,512	2,164,954	2,026,672	2,080,965	2,215,707	2,154,194	2,102,814
April	1,922,309	2,058,979	2,074,527	2,056,619	2,111,822	2,187,467	2,091,741	2,071,923
May	2,018,674	2,232,071	2,260,437	2,250,030	2,239,191	2,315,949	2,253,545	2,224,271
June	2,030,908	2,334,737	2,296,337	2,268,694	2,248,950	2,351,451	2,378,374	2,272,779
July	2,286,862	2,527,093	2,588,064	2,584,076	2,618,367	2,534,737	2,595,586	2,533,541
August	2,206,208	2,556,632	2,634,026	2,559,652	2,511,614	2,608,799	2,558,347	2,519,325
September	1,962,000	2,182,509	2,143,972	2,257,909	2,109,960	2,266,751	2,236,052	2,165,593
October	1,914,461	2,101,481	2,174,069	2,027,974	2,091,127	2,141,169	2,168,434	2,088,388
November	1,823,758	1,998,934	2,000,494	1,907,578	2,001,640	2,049,855	2,087,411	1,981,381
December	1,655,416	1,974,025	2,000,000	1,953,963	1,980,519	2,048,693	2,018,437	1,947,293
Total	23,122,708	26,045,785	25,996,120	25,814,379	25,715,885	26,668,684	26,339,870	25,671,919

<i>Percentage of total Atlantic City automobile traffic, by month: South Jersey Transportation Authority data</i>								
	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>average</i>
January	7.4%	7.4%	7.5%	7.4%	7.1%	7.6%	7.5%	7.4%
February	7.3%	7.6%	6.6%	7.8%	7.4%	7.2%	6.9%	7.3%
March	8.2%	8.3%	8.3%	7.9%	8.1%	8.3%	8.2%	8.2%
April	8.3%	7.9%	8.0%	8.0%	8.2%	8.2%	7.9%	8.1%
May	8.7%	8.6%	8.7%	8.7%	8.7%	8.7%	8.6%	8.7%
June	8.8%	9.0%	8.8%	8.8%	8.7%	8.8%	9.0%	8.8%
July	9.9%	9.7%	10.0%	10.0%	10.2%	9.5%	9.9%	9.9%
August	9.5%	9.8%	10.1%	9.9%	9.8%	9.8%	9.7%	9.8%
September	8.5%	8.4%	8.2%	8.7%	8.2%	8.5%	8.5%	8.4%
October	8.3%	8.1%	8.4%	7.9%	8.1%	8.0%	8.2%	8.1%
November	7.9%	7.7%	7.7%	7.4%	7.8%	7.7%	7.9%	7.7%
December	7.2%	7.6%	7.7%	7.6%	7.7%	7.7%	7.7%	7.6%

Spectrum expects that Atlantic City, due to its similar seasonal weather patterns, would provide useful guidance in what to expect at Massachusetts destination resorts outside of major metropolitan areas. In a major urban center such as Boston, which already has a significant business travel element, the gaming industry would further smooth out the seasonal shifts, and could – depending on the type of facility and the size and quality of the amenities – add significant off-season business in other areas. The keys to determining that would include the level of access from other areas, as well as the number of hotel rooms. In the off-season, as in

mid-week, hotel rooms would primarily function as marketing tools used to reward loyal gaming customers.

Reducing the sharp dips in seasonality would be one public-policy goal of using gaming to advance the leisure and hospitality industries. Another would be to add a significant attraction that would expand employment, while working in tandem with existing attractions.

Integrating gaming and tourism

Gaming can enhance tourism, but will not, by itself, move the visitation needle much simply because casinos are becoming increasingly omnipresent in multiple markets. Gaming can work best if it:

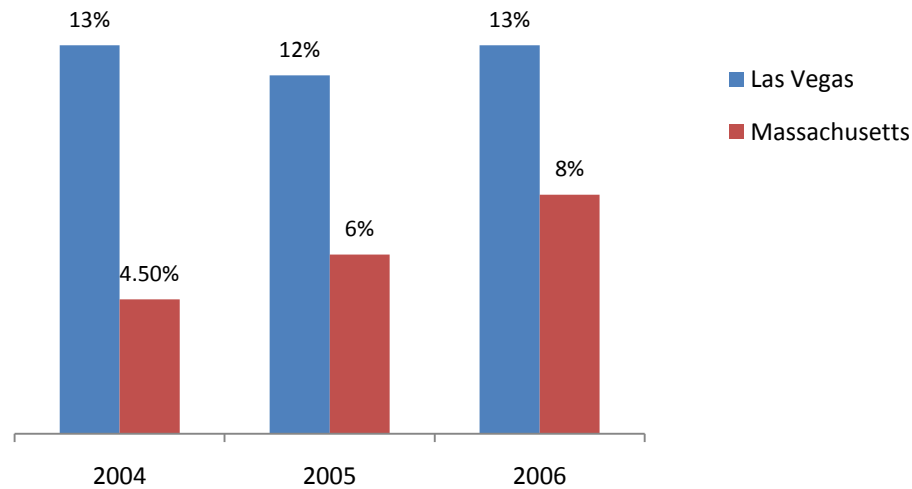
- Becomes a catalyst to attract additional capital investment.
- Extends the length of stay.
- Extends the tourism season.
- Is fully integrated into the tourism infrastructure.

We note, for example, that many of the leaders in Massachusetts who we interviewed in preparing this report are asking critical questions and are examining this issue realistically. Some of the suggested aspirations include:

- Boosting the conventions and meetings business by adding a new attraction that could also extend the length of stay.
- Targeting some high-end European travelers who might otherwise visit Las Vegas but would find another gaming destination appealing, since Massachusetts is significantly closer to Europe.

As the following chart shows, there might be some opportunity to grow foreign travel:

International visitors as pct. of total visitor base



Sources: Las Vegas Convention and Visitors Authority, Mass. Office of Travel & Tourism

Foreign gaming-related travel, however, is not an uncontested market. Atlantic City, Connecticut and the expanding Seminole Hard Rock properties in Florida (which recently agreed to a compact with the state that allows them to develop full-service Class III gaming) will also compete for that segment, and have similar geographic advantages. Canada, the United Kingdom and Germany were the top three countries of origin of international visitors and accounted for 54 percent of all international visitors to Massachusetts in 2006. As Massachusetts is already growing its share of foreign travel, gaming would offer a positive, yet limited boost to this trend.

Additionally, the second-home market can potentially boost gaming revenue, as well as be boosted by it. We note that, in recent years, Barnstable and Berkshire counties were two of the most successful second-home markets in the nation, as measured by price appreciation.³⁹ That raises an additional question that would clearly be subject to varying opinions: Would a casino help or hurt the ambience of a second-home market? That would, naturally, depend on the buyer. All we can do is point out that Las Vegas and the New Jersey shore have – until the recent sub-prime mortgage crisis struck – served as strong second-home markets as well.

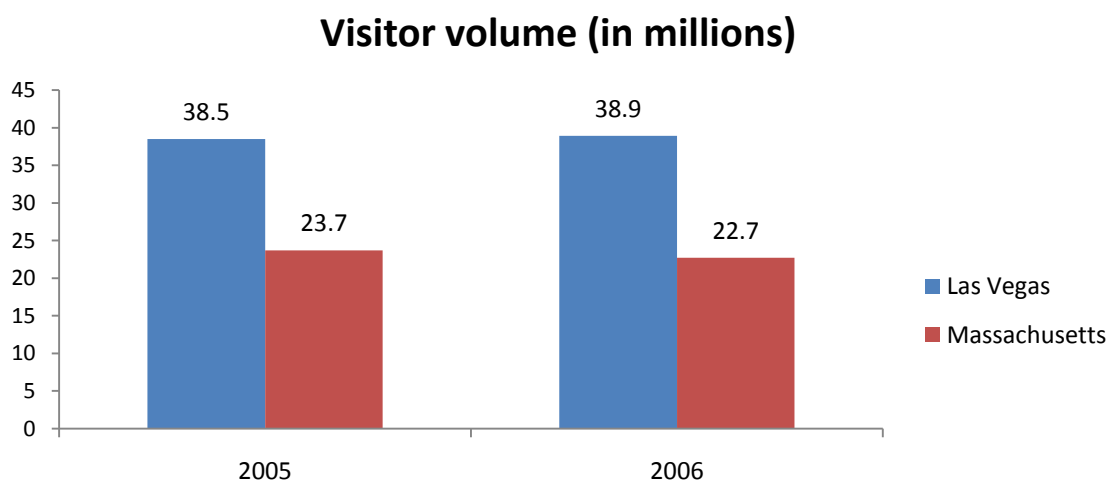
Three destination casinos spread geographically throughout the Commonwealth can have a material – albeit limited – impact on tourism. Three properties would likely not displace any existing gaming markets from their current positions. Las Vegas has achieved an effectively unassailable position as a national gaming destination. Atlantic City boasts a concentration of capital investment in one location that is not burdened by a limit on the number of licenses. Atlantic City casinos also operate with a tax rate of 8 percent (plus a 1.25 percent reinvestment obligation that offers a below-market return to casinos), which gives Atlantic City a significant competitive edge over the proposed 27 percent rate in Massachusetts.

³⁹ “Everybody’s doing it: Prices in coastal towns and resort areas have risen sharply in recent years,” January 27, 2004, Money.CNN.Com

Similarly, the two Indian casinos in Connecticut would have a slight tax advantage over Massachusetts (Connecticut receives 25 percent of slot revenue; table revenue is not taxed), and also have a head start of more than a decade in developing a critical mass of hotel rooms, retail, dining and other attractions.

Both Atlantic City and Connecticut are migrating away from convenience-driven gamblers, moving toward convention attendees and other segments of the population that are relatively untapped. To some degree, the existing tourism industry in Massachusetts has a head start in attracting the sort of leisure traveler now being targeted by other East Coast destinations. If destination casinos are approved, the public policy goals for Massachusetts should be to protect its existing market share, and to leverage the new attraction to grow its visitor base.

The following charts compare Massachusetts⁴⁰ to Las Vegas as destinations:



Sources: Las Vegas Convention and Visitors Authority, Mass. Office of Travel & Tourism

Massachusetts has a smaller visitor base, yet its visitors are slightly more affluent than Las Vegas visitors. The percentage of Massachusetts visitors in 2004 with annual incomes exceeding \$100,000 was 26.5 percent. In contrast, the percentage of Las Vegas visitors in 2006 with annual incomes over \$100,000 was 24 percent. As noted earlier, the Harrah's Survey indicates that adults with annual household incomes exceeding \$95,000 are the most likely income group to visit a casino. This income group has a casino participation rate of 31 percent.

Massachusetts reports a higher percentage of visitors with annual incomes exceeding \$75,000 and \$100,000 than either Las Vegas or Connecticut casinos.⁴¹ Since these higher-income adults visit casinos at higher percentage rates than any other income groups, Massachusetts has an opportunity to successfully market casino gaming to these adults.

⁴⁰ Massachusetts figures are reported on a fiscal year basis and, therefore, the 2005 figures represent the last six months of 2005 and the first six months of 2006 and the 2006 figures are for the 12-month period from July 2006 to June 2007.

⁴¹ Las Vegas Convention and Visitors Authority, Massachusetts Office of Travel & Tourism, Massachusetts Center for Policy Analysis

Gaming would not likely alter most of the basic characteristics of the Massachusetts visitor base:⁴²

- It still will have a high percentage of day-trip visitors: 32.9 percent at present.
- The average length of stay in Massachusetts – 3.2 nights for overnight visitors, and 2.1 nights overall – will not appreciably change.
- Most visitors – 82 percent at present – will still arrive via ground transportation.

We issue that cautionary note in large measure because Massachusetts already attracts about 23 million annual visitors, and three destination casinos cannot be expected to materially shift the demographics or patterns of that visitor base.

Still, destination casinos can produce positive change in areas that are both growing, and are at risk. For example, the Greater Boston Convention & Visitors Bureau indicated that extending the length of stay is a priority. Restaurants, hotels and others are fearful that casinos will compete against them for either customers or employees. The public-policy challenge then would be to require any successful bidder for a gaming license to develop a comprehensive marketing strategy that:

- Leverages and enhances existing attractions.
- Is fully integrated into the regional and statewide marketing programs.

Strategies for integration of gaming, tourism

Over the past three decades, gaming has evolved into a form of mainstream entertainment. Part of that evolution has been the successful balance between casinos and other area attractions. Quite simply, the greater the effort at integration, the more successfully gaming can work as a tool of public policy. This has been a relatively recent change in the nature of gaming, fueled in part by two internal trends that have started to take hold over the past decade:

- The casino industry – particularly in hub markets – has moved away from a business model that attempted to keep visitors inside the four walls of the property at all costs, ignoring outside attractions.
- The capital-intensive focus on hub properties – which can generate greater returns on investment than spoke properties – has allowed operators in such markets to broaden their appeal, leveraging tourism as a tool to increase the length of stay and the frequency of visitation, as well as expand the geographic and demographic boundaries.

Atlantic City offers unique insights into the trend. The early development of casinos – a period we define roughly as between 1978, when the first casino opened, to the early 1990s, when Atlantic City faced its first competition from other gaming markets in the East – was largely defined by casinos clearly focused on keeping customers inside their properties. Non-

⁴² Massachusetts Office of Travel & Tourism

gaming departments, such as food and beverage, were often viewed as cost centers designed to reward casino customers, rather than as potential revenue sources.

For example, Atlantic City had 116 apparel stores in December 1979, a month when its third casino hotel opened. By September 1981, shortly before the opening of its ninth casino, the number was down to 62, while the number of eating and drinking establishments during the same period dropped from 240 to 191.⁴³

In more recent years, Atlantic City has reported a spectacular rebound in both retail and restaurants. Three malls have opened in the past five years, two of which are attached to casinos. The number of outlets that serve food is estimated at 800, with about half being classified as restaurants.⁴⁴

Many of the new outlets in Atlantic City are considered to be top performers. For example, Morton's, The Steakhouse, a high-end, 140-seat restaurant at Caesars at the foot of the Atlantic City Expressway, in its first year generated more sales than all but four of the chain's 70 outlets, and set an internal record by serving 550 covers in one night.⁴⁵ This turnaround can be attributed to several factors, including:

- Tax incentives introduced by the state (as noted earlier) that encouraged non-casino investment by allowing developers to retain some taxes generated on-site to help offset the cost of construction.
- The changing nature of the casino industry, in which destination properties attempt to fully integrate themselves into the tourism industry.
- The growing challenge posed by competition from other states that forced operators to move beyond their core base of local customers.

Casinos, by their nature, generate tremendous volumes of visitation on a daily basis, but not all visitors, by definition, are tourists. In fact, in the gaming markets that we defined as “spokes,” the casino patrons are predominantly “locals.” That is, they are regular patrons within a two-hour drive, who gamble for a few hours, then return home. They typically do not respond to tourist messages. Casinos with hotels, naturally, will attract patrons who will travel farther, stay longer, spend more and may be more receptive to trial of attractions, services and establishments beyond the casino property.

In recent months, we have interviewed approximately a dozen officials around the United States with expertise in the merging of gaming and tourism, and many participated in a survey that we conducted in 2007.⁴⁶ Whether gaming is the dominant industry – as it is in Atlantic City – or simply another bullet in the region's tourism arsenal – as is the Seminole Hard Rock Hollywood Hotel & Casino in South Florida – casinos are promoted as just one component of the city's or region's overall tourism mix. Ellen Oppenheim, president and chief executive officer of

⁴³ “Hostage to Fortune: Atlantic City and Casino Gambling,” by Michael Pollock, Center for Analysis of Public Issues, Princeton, NJ, 1987, citing Atlantic County Division of Economic Development.

⁴⁴ Atlantic City Department of Public Health

⁴⁵ *Gaming Industry Observer*, Vol. 11, no. 14

⁴⁶ This section of the report includes a number of quotes and facts gleaned from these interviews with tourism experts. Most of these were conducted in 2007. Some – as noted in the text – were interviewed for this specific study.

the Reno-Sparks Convention and Visitors Authority in Nevada, addressed the issue succinctly: “We don’t promote casinos. We make people aware that gaming is available.”

Las Vegas, as noted earlier, has limited value as a model for Massachusetts but still offers a rather telling example as to how gaming can potentially be both a driving force for tourism and a key component in a larger tourism infrastructure. Increasingly, major casino properties in Las Vegas are embracing tourism beyond its gaming component. For example, major resort properties tend to select a few operators to provide door-to-door tours of the Grand Canyon for hotel guests. The operators include small private tours in a Suburban (nine hours door-to-door); a motor coach (11 hours door-to-door); and, helicopter tours (three–four hours door-to-door). While we do not know the percentage of visits that originate in Las Vegas, the Grand Canyon generates 5 million visits per year.⁴⁷

Similar tours are offered for Hoover Dam, about 30 miles southeast of Las Vegas, and Red Rock Canyon, about 15 miles west of Las Vegas. Additionally, Las Vegas has embraced other attractions, from the canopied Fremont Street Experience to outlet shopping. Casinos have also developed a close partnership with the Las Vegas Convention and Visitors Authority, an agency that has taken the lead on developing general image and marketing campaigns for the resort.

Nationwide, the relationship between casinos and their host tourism agencies is described as good but not great, although there are exceptions, such as in southeastern Connecticut, the Mississippi Gulf Coast and New Orleans. Casinos support tourism efforts in general, recognizing that the more visitors to their host city will result in more visitors to their properties. Casinos, however, generally are not active promoters of tourism beyond their property boundaries. Their efforts typically are limited to making patrons aware of other establishments and attractions through literature racks and concierge services. John M. Hutar, vice president for hotel operations for the MGM Grand Detroit Casino, noted that his casino’s effort to promote tourism elsewhere in the city is “limited to CVB (Detroit Metro Convention and Visitors Bureau) collateral made available.” Hutar added, “Since Detroit is primarily a local gaming market, each casino markets their property on their own, supporting CVB initiatives as they deem appropriate.”

Casinos, however, do seek representation on CVBs and tourism agencies, owing to the large visitor counts that casinos generate. In some markets, achieving the proper casino representation on a tourism or CVB board is a careful balancing act. Tourism expert Peter Yesawich, chairman and chief executive officer of Ypartnership in Orlando, Fla., suggests that casino representation be “proportional with the economic impact of the industry on the destination expenditures made by visitors.” Allowing casino representation on a tourism board can have the additional benefit of securing marketing or operational funds from the casino industry.

An over-emphasis by tourism agencies on the casino product – notably in markets where casinos are not dominant – can lead to complaints of favoritism among nongaming establishments or attractions. This can further lead to an erosion of support – financial or otherwise – among nongaming members of the tourism agency and among the business community at large.

⁴⁷ National Park Service

To encourage casino patrons to visit nongaming establishments and attractions, there first must be a compelling reason for the patron to leave the casino property. That is, there must be “something in it for me.” Further, casino management must also recognize that such initiatives will add value to their patrons’ visits in order to lend the gaming industry’s support to the effort.

Coupons and similar promotions are an effective means of achieving this result. In Atlantic City, for instance, players enrolled in the Harrah’s Entertainment’s Total Rewards loyalty-card program can redeem their loyalty-club points (similar to frequent-flyer points) to buy merchandise and meals at The Pier, a major retail, dining and entertainment complex on the Boardwalk. The former Sands Casino Hotel in Atlantic City previously undertook a program in which players could redeem their loyalty-club points at The Walk/Atlantic City Outlets, a non-casino retail complex in midtown Atlantic City. In southeastern Connecticut, area hotels report that 30 percent to 70 percent of their business is related to Foxwoods and Mohegan Sun – even though those two casinos combined have more than 2,000 hotel rooms of their own. Many members of Mystic Coast & Country Travel Industry Association Inc. do have shuttle runs to and from the casinos to encourage cross-visitation. Previously, there were programs in which casino buses from New York City or Philadelphia would also stop at the Tanger Outlet Center in Westbrook or the Clinton Crossing Premium Outlets in Clinton.

We suggest certain strategies can be implemented to help ensure that gaming advances the public policy of boosting the leisure and hospitality industries in Massachusetts. The solution in such instances is to weigh applicants for licensure, in part, on how they intend to negotiate arrangements between themselves and local businesses and to develop arrangements with those businesses that offer the requisite level of service. Such arrangements must recognize and serve the interests of both the casino and the outside business.

The program basics are as follows: As casino customers are identified and their play is rated, they are awarded complimentaries or bonuses. Customers are then eligible to redeem these rewards at the participating non-gaming partner’s establishments. The casino is then charged back from the non-gaming partner, at a discounted rate off the retail price. Although each casino operator’s programs may have a different name, promotion or packaging, the basic mechanics remain the same.

For example, as a local restaurant partners with a Massachusetts casino resort, the casino would direct customers to utilize their awards in that establishment. The restaurant would not only reap the benefits of advertising and publicity, but also would be given new customers. If the restaurant has reservation policies, they would all be incorporated into the program. The casino operator, because of the volume of business it would send, would in essence become one of the establishment’s bigger customers. Although this business is discounted, the incremental returns that the restaurant owner receives far exceed any expense.

Indeed, a casino patron whose meal is free or subsidized is more likely to order higher-margin, more profitable items, from alcoholic beverages to dessert and coffee.

The economic structure of these programs has been consistent in most gaming jurisdictions. Casino operators will pre-determine the specifics such as volume estimates, redemption dates and award values and coordinate all program details and procedures well in advance with the non-gaming partners. The non-gaming establishments would charge the casino operators for all redeemed awards and be reimbursed by the casino operator within 30 days of the transaction.

In exchange for this business, participating non-gaming partners will be required to discount the charge back to the casino, usually in range of 5 percent to 25 percent (off retail price). So if a customer has dinner at a partnering restaurant and spends \$100, the casino would reimburse the reconciliation of the discount and the charge back is handled strictly as an internal billing system and is not seen by the customers. The program's discount percentage may fluctuate based on the type of partner (restaurant, retailer, hotel, entertainment attraction, etc.). In addition it can be pre-agreed upon to fluctuate during peak and non-peak business times.

Examples of this include the relationship the Tropicana Casino Resort has with a local Atlantic City restaurant, where it sends its best slot customers. The Hard Rock casino in Fort Lauderdale sends its premium slot players by bus 20 minutes away to an Italian restaurant that is a haunt for celebrities.

Prominent Biloxi, Miss., restaurateur Bobby Mahoney in 1998 noted the impact of this type of partnering arrangement with the city's casinos on his landmark Mary Mahoney's Old French House Restaurant: "My revenue is up probably 60 or 70 percent (since casinos). When people come here, 25 percent do the casino thing; the other 75 percent, they want to get out, walk around and see what's going on."⁴⁸

The same newspaper story noted the cooperation between the casino industry and non-casino business in Biloxi:

"Casino executives say they understand their role in promoting the whole coast. They encourage their guests to play golf (22 courses), go deep-sea fishing (more than 50 charter boats), attend special events (Mardi Gras, Cruisin' the Coast), go shopping (antiques to outlet malls), enjoy the beach (26 miles of white sand) and visit attractions such as Jefferson Davis' Beauvoir estate, the Maritime & Seafood Industry Museum, NASA's Stennis Space Center, and the Mardi Gras Museum.

"We like to let our guests know what's going on in the area. There are wonderful synergies between all the other things going on and what we offer," said Jeff Dahl, general manager of Casino Magic.

"Casinos often encourage guests to eat at non-casino restaurants, and in some cases pick up the bill."⁴⁹

Notably, at this writing, the trend toward encouraging third-party restaurants and others to develop non-gaming attractions in or near casinos is also evolving in what we have termed the "spoke" markets in Pennsylvania and elsewhere. The following account is from a newspaper in the Poconos region of northeast Pennsylvania:

"The entry foyer in the Ruth's Chris Steak House at Mohegan Sun at Pocono Downs will incorporate metal, glass and tile elements. The Bocci chandelier matches lights in the dining room.

"That might sound like a formula for tension, but everyone involved in building new restaurants at Mohegan Sun at Pocono Downs is nearly giddy at the prospects for the finished product.

⁴⁸ *The Press of Atlantic City*, October 18, 1998

⁴⁹ *The Press of Atlantic City*, October 18, 1998

“Each casino operator has its own approach to filling space beyond the gambling floor; some prefer to build and run their own restaurants and shops while others lease out space to experienced operators. The permanent casino scheduled to open at the Downs in August will blend the two approaches.

“‘We believe that a mix makes sense,’ Downs CEO Bobby Soper said on Monday, after he announced the eateries and shops that will ring the casino’s 2,500 slot machines.

“‘Leased spaces bring in brands and concepts that have instant goodwill and brand loyalty,’ he explained.

“Three upscale restaurants will be located adjacent to one another and will be accessible without entering the casino floor, allowing persons under 21 to go for a meal.

“‘What they did is they opened the casino up to anyone,’ said Jim Cafarelli, who will open his third Rustic Kitchen Bistro & Bar at the Downs.

“A Ruth’s Chris Steak House brings a national brand but with local connections – the franchise will be built and operated by The Metz Group of Dallas, which runs the employee cafeteria in the Downs’ interim casino.

“‘Since they opened I’ve always thought we’d try to figure out how to get a restaurant inside,’ said Jeff Metz, president of the family-owned firm.

“He added that when Soper gave him a crack at one of the spaces, ‘We didn’t know what brand we’d be looking for.’

“The selection was helped by extensive research the Mohegans conducted to find out what the market would support.

“‘Ruth’s Chris is something that, from both a brand and relationship standpoint, seemed to make sense,’ Soper said.

“Bar Louie, which touts itself as a hip, urban bar and restaurant, will round out the trio of high-end food and entertainment venues that each occupy about 8,000 square feet.

“The formula for these partnerships is simple: ‘They gave us the box and we need to fill it,’ Metz said succinctly.”⁵⁰

Gaming in historic settings

Spectrum cautions that such partnerships between casinos and other hospitality businesses are not always so simple to establish. Areas of Massachusetts – from Boston to Cape Cod and other regions – already have tourism industries that have an existing identity that may or may not work well with gaming. Rep. Thomas Conroy, for example, was one who raised a number of telling questions, including issues related to how gaming would work with – or possibly conflict with – tourism elements in Massachusetts, including Boston, that are tied to historical sites.

⁵⁰ “Casino Eateries a Mix,” by Ron Bartizek, Wilkes-Barre *Times Leader*, April 3, 2008

In part, we can look at Philadelphia, another major northeastern urban center with a rich heritage tied to colonial days. Philadelphia, by state law, is allotted two casinos (which could open as early as 2010) within its municipal boundaries, and has two more currently operating just beyond the city limits. None of the Philadelphia officials with whom we have spoke in recent years expects casinos to overshadow Philadelphia's cultural heritage, or to alter it in any material way. Still, we suggested to them – as we do to leaders in Massachusetts – to take steps to help integrate gaming with existing attractions.

To help address that, we examined two markets that have prominent historic and gaming attractions.

Deadwood, South Dakota

We interviewed George Milos, executive director of the Deadwood Chamber of Commerce, and Chuck Turbiville, executive Director of the Deadwood Economic Development Corporation.

Deadwood markets itself as follows: “Located in the Black Hills of South Dakota, historic Deadwood, with its ongoing restoration, is being transformed back into the Wild West place that once drew the likes of Wild Bill Hickok and Calamity Jane. The entire town is a registered National Historical Landmark that is full of modern day fun with over 80 gaming halls offering a variety of slot machines and live table games.”⁵¹

Deadwood offers a Historical Deadwood Getaway Package, a National Parks and Monuments Package, and other historical, adventure and sightseeing packages, some of which include gaming and entertainment coupons for use at casinos. Deadwood also promotes a Historical Deadwood Gaming Special, which offers a chance to “play like a legend in historic Deadwood, South Dakota,” and “test your luck in the most notorious town in the Black Hills.” The Gaming Special offers “casino style gaming and lots of free attractions at historical sites,” and includes free trolley tokens, lodging and \$350 in Wild Bill's gaming and entertainment coupons.

The tourism officials we interviewed indicated that, based on all their research, the visitor base of Deadwood is a 50-50 mix of “strong gamers” and “historical visitors.” The strong gamers are those visitors who live within a 100-mile radius of Deadwood and, first and foremost, visit Deadwood to gamble at the casinos. Since Deadwood is the only casino gaming offered in this region, Deadwood's marketing efforts are not directed at these visitors, who tend to be repeat casino patrons.

The other group, the historical visitors, is the target of Deadwood's tourism marketing efforts. This group is typically from outside a 100-mile radius of Deadwood and it is the historical aspects of Deadwood that attract this segment to town. This is done through marketing special events and promotions featuring Deadwood's National Historic Landmark status. Once these visitors arrive in Deadwood, it is the individual casino property owners who are responsible for marketing casino gaming to these visitors.

⁵¹ Deadwood Chamber of Commerce, via www.deadwood.org

Vicksburg, Mississippi

Vicksburg first gained national prominence as the site of a siege in 1863 when the Union forces captured it, gaining control over the Mississippi River. For nearly 80 years, Vicksburg was known for its refusal to celebrate July 4th – the date of its surrender – as a holiday. It is still a prominent historic site, but is also home to four riverboat casinos and a 50,000 square-foot convention center.

The Vicksburg Convention and Visitors Bureau informs visitors to visit Vicksburg and “you will appreciate all Vicksburg has to offer as you choose how you’ll spend your days and nights.”⁵² In addition to 63 historical sites and Civil War landmarks on the National Register of Historic Places, quiet antebellum bed and breakfasts, African American heritage sites, and recreation activities along the Mississippi River, Vicksburg offers visitors a chance to “step out to the casinos and play until dawn.” Vicksburg casinos offer “around the clock entertainment opportunities,” shopping, casual and fine dining, and a wide range of lodging.

Visitors are encouraged to try their luck on the riverboat casinos and enjoy the variety of entertainment offered at the “floating palaces.” The emphasis is on the casinos as a nighttime destination: “Nightfall finds me following the bright lights over to the four casinos located along the river,” where musical entertainment in the casino lounges, gaming and shopping are the prime attractions.

Spectrum interviewed Bill Seratt, executive director of the Vicksburg Convention and Visitors Bureau. He indicated that because casino gaming is a relatively new product (10 years) for this region, there has been no research to evaluate the local tourism market. He said the initial focus of casino gaming in Vicksburg has been to establish a “universal casino base of gamers,” which is a “separate breed” from the “cultural or history based travel tourist.” He said there is “very little evidence of cross-over” between these two distinct segments of the Vicksburg visitor base. However, he indicated that as the local casino gaming industry matures, they hope to pursue opportunities to cross-market Vicksburg to increase its total visitor base.

Seratt said that because Vicksburg is located on Interstate 20, which is the major East-West road in the region, it is able to attract visitors from greater distances than other casino markets. He indicated that the cultural/history-based travel tourists tend to travel greater distances to visit Vicksburg than the casino patrons.

⁵² <http://www.vicksburgcvb.org/visit/index.html>

Section II: Economic Impacts

Gaming revenue projections

This section of our analysis has been developed in two phases. First, we look at the basic demand for the type of planned destination casinos, absent any specific marketing programs that would rely on hotel rooms to target and reward gaming customers. This allows us to conservatively project the level of demand based on population within a reasonable driving distance. Second, we follow that with certain assumptions regarding the potential use of hotel rooms as marketing tools to develop our revenue estimates.

In endeavoring to project a range of gaming revenues for three destination casinos in the Commonwealth of Massachusetts, we began with certain assumptions. Each casino, according to the proposed legislation, would be situated in one of three regions:

- Region 1 - Suffolk, Middlesex and Essex counties
- Region 2 - Norfolk, Bristol, Plymouth, Nantucket, Dukes and Barnstable counties
- Region 3 - Worcester, Hampshire, Hampden, Franklin and Berkshire counties

We were not able to project precise locations, nor should anyone infer from this analysis that we are suggesting specific locations. We are, in this analysis, assuming that each of the three would be located near the geographic center of each region. While we assume there will be destination casinos, as defined in the legislation, we did not make any assumptions beyond what would be considered a base project that meets the criteria.

Spectrum has constructed a capital investment model for a resort prototype, which would be of the nature of the Borgata in Atlantic City, NJ. As a model, this type of facility would be an attraction and at least somewhat competitive to the Connecticut tribal operators. The following assumptions were used in Spectrum's model:

- 160,000 square-foot casino
- 3,000 slot machines
- 180 live table games: 120 traditional, 60 poker
- Six restaurants: 400-seat buffet, 150-seat coffee shop, 150-seat casual outlet, two 150-seat specialty outlets, 150-seat deli
- Two bars
- One nightclub
- 2,000-room hotel at 530 square feet per regular room, four-fixture bathroom
- 100,000 square feet of convention/meeting/event space
- 20,000 square feet of retail space
- 5,000-space guest parking garage
- 1,800-space employee parking facility

- One indoor pool and spa

While the assumptions above may be less than those found in Connecticut and other destination markets, we built these assumptions for reasons that we believe are both necessary and compelling:

- Projects of such magnitude rarely build out to their full potential at the outset, and are more likely phased in as operators develop more brand awareness, build a loyalty program and its attendant database and – most importantly – gain confidence in the market. This latter point requires a high level of confidence in the regulatory and political climate, and an understanding that the rules – including the tax rate – do not change for the worse insofar as the business is concerned.
- Our mandate in any such endeavor is to be conservative. The suggested legislation is fraught with too many unknowns – particularly with respect to precise locations, capital budgets and other relevant factors – that render it impossible to develop projections that are more precise.

Our assumptions are also built on real-world knowledge of how gaming markets operate, and this includes certain factors that we believe need to be considered in any such analysis:

- Properties of such magnitude take approximately three years to fully develop their business model. This length of time is necessary to adjust staffing levels, to ensure the right mix of games and amenities and, most important, to build a database of loyal customers that can be effectively mined and marketed. That is why our analysis focuses on a stabilized Year 3.
- Existing properties, particularly in Connecticut, will not stand idly and accept a significant decline of business from one of their primary markets. Such properties already have access to a large database of Massachusetts adults, and they can be expected – wherever possible – to increase the value and variety of offerings to these customers to hold on to their present level of revenue. Additionally, we can expect Connecticut casinos to leverage other advantages – such as the ability to provide smoking areas as well as the absence of any tax on table-games revenue – to limit any damage from Massachusetts’ competition.

In this initial phase of our revenue projections, we do not assume the existence of marketing programs that would leverage hotel rooms. Later in this section, we will make certain assumptions regarding the use of hotel rooms.

Our methodology in developing this phase of the model is to examine a variety of factors for each of these properties, which we assumed to be in the center of each of these regions. These factors include, but are not limited to:

- Total population
- Number of adults
- The number and quality of competitors within a two-hour drive
- Number of slots and tables within that drive time
- The type and quality of amenities of each competitor

- Each competitor's distance from center of each region
- The gaming value of each region adjusted for household income levels

With that in mind, we have developed the following projections. As noted, these are projections for Year 3, which we would consider the first stabilized year:

Region 1

Stabilized Year 3	Low Case	Moderate Case	High Case
Adults	7,784,294	7,784,294	7,784,294
Avg. annual trips per gaming adult	6.7	6.7	6.7
Region One Share of Visits	16.0%	20.0%	24.0%
Gaming Value per Visit	\$150	\$150	\$150
Gross Gaming Revenue	\$ 350,480,031	\$ 438,100,038	\$ 525,720,046
Slot Win per Unit per Day	\$224	\$280	\$336
Table Win per Unit per Day	\$ 2,741	\$ 3,421	\$ 4,101
Poker Win per Unit per Day	\$350	\$450	\$550
Calculated Gaming Tax @ 27%	\$ 94,629,608	\$ 118,287,010	\$ 141,944,412
Actual Gaming Tax Paid	\$ 100,000,000	\$ 118,287,010	\$ 141,944,412
Effective gaming Tax Rate	28.5%	27%	27%

Region 2

Stabilized Year 3	Low Case	Moderate Case	High Case
Adults	7,046,663	7,046,663	7,046,663
Avg. annual trips per gaming adult	6.7	6.7	6.7
Region One Share of Visits	16.0%	20.0%	24.0%
Gaming Value per Visit	\$161	\$161	\$161
Gross Gaming Revenue	\$ 339,477,794	\$ 424,347,242	\$ 509,216,691
Slot Win per Unit per Day	\$217	\$271	\$326
Table Win per Unit per Day	\$ 2,650	\$ 3,488	\$ 3,965
Poker Win per Unit per Day	\$350	\$450	\$550
Calculated Gaming Tax @ 27%	\$ 91,659,004	\$ 114,573,755	\$ 137,488,506
Actual Gaming Tax Paid	\$ 100,000,000	\$ 114,573,755	\$ 137,488,506
Effective Gaming Tax Rate	29.5%	27.0%	27.0%

Region 3

Stabilized Year 3	Low Case	Moderate Case	High Case
Adults	7,154,330	7,154,330	7,154,330
Avg. annual trips per gaming adult	6.7	6.7	6.7
Region One Share of Visits	16.0%	20.0%	24.0%
Gaming Value per Visit	\$130	\$130	\$130
Gross Gaming Revenue	\$279,597,149	\$ 349,496,437	\$ 419,395,724
Slot Win per Unit per Day	\$179	\$223	\$268
Table Win per Unit per Day	\$ 2,158	\$ 2,693	\$ 3,227
Poker Win per Unit per Day	\$350	\$450	\$550
Calculated Gaming Tax @ 27%	\$ 75,491,230	\$ 94,364,038	\$ 113,236,845
Actual Gaming Tax Paid	\$ 100,000,000	\$ 100,000,000	\$ 113,236,845
Effective Gaming Tax Rate	35.7%	28.6%	27.0%

The tables above are summarized for all of Massachusetts in the following table:

Total State

Stabilized Year 3	Low Case	Moderate Case	High Case
Adults	8,140,831	8,140,831	8,140,831
Avg. annual trips per gaming adult	6.7	6.7	6.7
MA Share of MA feeder Visits	43.2%	54.0%	64.8%
Gaming Value per Visit	\$147	\$147	\$147
Gross Gaming Revenue	\$969,554,974	\$1,211,943,717	\$1,454,332,460
Slot Win per Unit per Day	\$211	\$261	\$313
Table Win per Unit per Day	\$ 2,577	\$ 3,234	\$ 3,801
Poker Win per Unit per Day	\$350	\$450	\$550
Calculated Gaming Tax @ 27%	\$ 261,779,843	\$ 327,224,804	\$ 392,669,764
Actual Gaming Tax Paid	\$ 300,000,000	\$ 332,860,766	\$ 392,669,764
Effective Gaming Tax Rate	30.9%	27.5%	27.0%

This analysis – which does not include the use of hotel rooms as marketing tools – shows that the three properties would generate between 6.6 million and 9.9 million annual visits, which would translate into between 18,000 and 27,000 daily visits to casinos.

The following tables provide the detailed assumptions for each region, based on three scenarios, for a stabilized Year 3:

Region 1

Stabilized Year 3	Low Case	Moderate case	High case
2-hour drive population	10,379,058	10,379,058	10,379,058
Adult %	0.75	0.75	0.75
Adults	7,784,294	7,784,294	7,784,294
Gaming Incidence Rate	0.28	0.28	0.28
Adult visitors ("gamers")	2,179,602	2,179,602	2,179,602
Avg. annual trips per adult	6.7	6.7	6.7
Annual Gaming Visits	14,603,335	14,603,335	14,603,335
Region One Share of Visits	16.0%	20.0%	24.0%
Region One Gaming Visits	2,336,534	2,920,667	3,504,800
Gaming Value per Visit	\$150.00	\$150.00	\$150.00
Gross Gaming Revenue	\$350,480,031	\$438,100,038	\$525,720,046
Days	365	365	365
Gross Slot Win	\$245,336,021	\$306,670,027	\$368,004,032
Slot Win per Unit per Day	\$224.05	\$280.06	\$336.08
Units	3,000	3,000	3,000
Gross Table Win	\$100,034,009	\$124,860,011	\$149,686,014
Table Win per Unit per Day	\$ 2,740.66	\$ 3,420.82	\$ 4,100.99
Table Units	100	100	100
Gross Poker Win	\$ 5,110,000	\$ 6,570,000	\$ 8,030,000
Poker Units	40	\$ 6,570,000	40
Poker Win per Unit Per Day	\$350	40	\$550

Region 2

Stabilized Year 3	Low Case	Moderate case	High case
2-hour drive population	9,395,551	9,395,551	9,395,551
Adult %	0.75	0.75	0.75
Adults	7,046,663	7,046,663	7,046,663
Gaming Incidence Rate	0.28	0.28	0.28
Adult visitors ("gamers")	1,973,066	1,973,066	1,973,066
Avg. annual trips per adult	6.7	6.7	6.7
Annual Gaming Visits	13,219,540	13,219,540	13,219,540
Region Two Share of Visits	16.0%	20.0%	24.0%
Region Two Gaming Visits	2,115,126	2,643,908	3,172,690
Gaming Value per Visit	\$160.50	\$160.50	\$160.50
Gross Gaming Revenue	\$339,477,794	\$424,347,242	\$509,216,691
Days	365	365	365
Gross Slot Win	\$237,634,456	\$297,043,070	\$356,451,683
Slot Win per Unit per Day	\$217.02	\$271.27	\$325.53
Units	3,000	3,000	3,000
Gross Table Win	\$96,733,338	\$127,304,173	\$144,735,007
Table Win per Unit per Day	\$2,650.23	\$ 3,487.79	\$ 3,965.34
Table Units	100	100	100
Gross Poker Win	\$5,110,000	\$ 6,570,000	\$ 8,030,000
Poker Units	40	40	40
Poker Win per Unit Per Day	\$ 350	\$450	\$550

Region 3

Stabilized Year 3	Low Case	Moderate case	High case
2-hour drive population	9,539,106	9,539,106	9,539,106
Adult %	0.75	0.75	0.75
Adults	7,154,330	7,154,330	7,154,330
Gaming Incidence Rate	0.28	0.28	0.28
Adult visitors ("gamers")	2,003,212	2,003,212	2,003,212
Avg. annual trips per adult	6.7	6.7	6.7
Annual Gaming Visits	13,421,522	13,421,522	13,421,522
Region Three Share of Visits	16.0%	20.0%	24.0%
Region Three Gaming Visits	2,147,444	2,684,304	3,221,165
Gaming Value per Visit	\$130.20	\$130.20	\$130.20
Gross Gaming Revenue	\$279,597,149	\$349,496,437	\$419,395,724
Days	365	365	365
Gross Slot Win	\$195,718,004	\$244,647,506	\$293,577,007
Slot Win per Unit per Day	\$178.74	\$223.42	\$268.11
Units	3,000	3,000	3,000
Gross Table Win	\$78,769,145	\$98,278,931	\$117,788,717
Table Win per Unit per Day	\$2,158.06	\$2,692.57	\$3,227.09
Table Units	100	100	100
Gross Poker Win	\$5,110,000	\$6,570,000	\$8,030,000
Poker Units	40	40	40
Poker Win per Unit Per Day	\$350	\$450	\$550

Hotel rooms as casino marketing tools

These revenue assumptions, by design, do not represent the full potential of three destination casinos in Massachusetts. Hotel rooms can be used quite effectively as marketing tools that would generate additional incremental revenue. We note that, in a seasonal market such as Massachusetts, the rooms would likely be targeted during the off-season and midweek to casino customers. If, for example, one 2,000-room hotel sets aside half of its available room nights to casino customers who have a theoretical value (i.e., projected gambling loss) of at least \$200 per day, that alone would add \$73 million in gaming revenue to our estimates per property. That is a conservative scenario, and the use of rooms to reward gaming customers and encourage loyalty and repeat visitation could be much higher than that.

We have used our existing scenarios to calculate the incremental gaming "lift" that could be generated in the three regions from the use of hotel rooms as marketing tools. The next table reflects certain assumptions, including an assumed 50 percent of all room nights would be set aside for casino customers. (In Atlantic City, the figure is at least 64 percent, based on an extrapolation of publicly available data.) The value of those overnight casino guests varies, as measured as a multiple of the gaming values established in the models that were delineated earlier. The assumptions in this model are that this is incremental revenue, over and above the projections in our base model. With an expectation that there is more than one adult per occupied room, in most rooms, this section of our model does not show the total gaming revenue that would be generated per room night, but focuses on the incremental revenue that could be generated by such marketing programs.

The results are as follows:

Low Case			
	Region 1	Region 2	Region 3
Rooms	2,000	2,000	2,000
Occupancy rate, gaming customers	50%	50%	50%
Ratio of overnight guest value to standard visitor	1.9	1.7	1.2
Incremental \$ value of room night, gaming customers	\$279.0	\$253.0	\$180.0
Incremental gaming revenue (in millions)	\$101.8	\$98.6	\$56.9
Moderate Case			
	Region 1	Region 2	Region 3
Rooms	2,000	2,000	2,000
Occupancy rate, gaming customers	50%	50%	50%
Ratio of overnight guest value to standard visitor	1.9	1.8	1.8
Incremental \$ value of room night, gaming customers	\$285.0	\$ 281.0	\$228.0
Incremental gaming revenue (in millions)	\$104.0	\$102.5	\$83.2
High Case			
	Region 1	Region 2	Region 3
Rooms	2,000	2,000	2,000
Occupancy rate, gaming customers	50%	50%	50%
Ratio of overnight guest value to standard visitor	2.2	2.0	1.9
Incremental \$ value of room night, gaming customers	\$323.0	\$313.0	\$247.0
Incremental gaming revenue (in millions)	\$117.7	\$114.2	\$90.3

In a practical sense, we suggest that the judicious use of marketing programs and amenities to expand gaming revenue could add significantly to annual gaming revenue statewide. We note, additionally, that three new properties in Massachusetts would compete against each other, as well as with properties in Connecticut and elsewhere and could not take such incremental growth for granted. Based on our conservative assumptions, this summarizes our gaming revenue scenarios:

Total est. gross gaming revenue (in millions)				
	Region 1	Region 2	Region 3	Total
Low case	\$452.3	\$438.1	\$ 336.4	\$ 1,226.8
Moderate case	\$542.1	\$526.8	\$ 432.7	\$ 1,501.6
High case	\$643.4	\$623.4	\$ 509.7	\$ 1,776.5

3,000 slots vs. 5,000 slots: optimizing units

In reviewing much of the analysis provided by others and in listening to debates regarding this issue in Massachusetts, we recognize that there is the potential for a misunderstanding as to the importance of projecting the number of slot machines that should be on a casino floor. The number of slot machines on the floor is a function of the perceived demand; it does not drive the perceived demand. Adding more slot machines would not necessarily translate into more revenue.

We must emphasize that, in our experience and in the experience of most gaming operators, slot managers strive to determine the optimal number of units that should be placed on the floor. The factors that help make that determination include answering the following questions:

- Is there a sufficient variety of machines to meet the demand in all market segments?
- Is there a sufficient number of machines, in the necessary categories, to meet the demands at peak periods?

Note that slot machines appeal to a variety of different players, from those who favor video poker machines to those who favor mechanical reels, and to those who play for progressive jackpots as well as those who favor frequent payouts, elaborate bonus rounds, multi-line/multi-coin games and so forth.

Additionally, casinos are often configured to determine the optimal number of machines that would meet peak demand on, say, Saturday nights in summer. Casino managers would rather be in a position where certain machines are empty at peak periods, rather than have players turned away because they cannot find a spot at their favorite games.

With that in mind, we reiterate that the number of machines will not drive demand. Revenue would not necessarily be greater with 5,000 slots than with 3,000.

A similar debate unfolded in 2005 and 2006 when Pennsylvania began planning its casino industry. Casinos were authorized to install up to 5,000 machines, but it was expected that they would start with fewer. At the February 2005 Pennsylvania Gaming Congress, analyst Aimee Marcel of Jefferies & Co. made the point that the initial installations would be likely lower to avoid the risk of being perceived as “empty.”

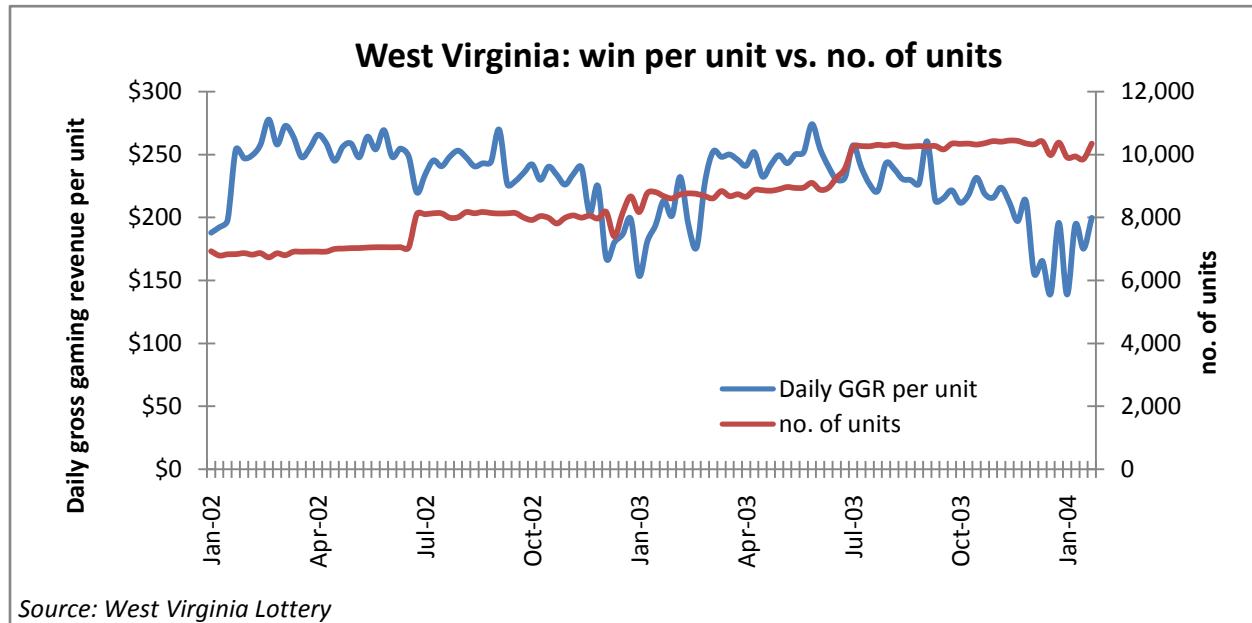
Indeed, many gaming facilities in the East have grown that way. In most instances, the growth in the number of machines was accompanied by a perceptible decline in the daily win per unit.⁵³

In Connecticut, both Foxwoods and Mohegan Sun had a combined daily gross gaming revenue (GGR or “win”) per unit of \$402 for all of 2002, when they had 8,858 slots. After a 50

⁵³ “Win” is gross gaming revenue. It is the equivalent of what is left over after all winning wagers have been paid, and is not synonymous with “handle.” The latter term refers to “coin in,” or the total amount wagered. Daily win per unit is a commonly applied metric in the gaming industry to determine the relative production of individual slots.

percent increase in the number of slots, as well as significant increases in hotel rooms and other amenities, the win per unit was \$340 in 2003.⁵⁴

Racinos in West Virginia experienced similar drops in GGR per unit as the number of units expanded during the period from 2003 to 2004, as shown in the chart below:



Note that, for the most part, this period of significant expansion in the number of machines was accompanied by a decline in revenue per unit. Still, expansions tend over time to help grow overall revenue by striving to ensure that a property can address the demand from all segments of the market.

Geographic market overview

As detailed more fully in our Gaming Revenue Projections section, we began our assessment by reviewing the location specific requirements detailed in the pending legislation as described below:

- Region 1 - Suffolk, Middlesex and Essex counties
- Region 2 - Norfolk, Bristol, Plymouth, Nantucket, Dukes and Barnstable counties
- Region 3 - Worcester, Hampshire, Hampden, Franklin and Berkshire counties

In order to ascertain the potential of each region – while not selecting a definitive location for each destination resort casino – we plotted unspecific locations in the geographic center of each region. While Spectrum examined the gaming market populations within a 150-mile radius of each of the three casinos, we used the populations within a 2-hour drive-time of

⁵⁴ Connecticut Division of Special Revenue

each approximate site to forecast visitation and gaming revenue potential. This defined subset of the broader regional population was utilized for several reasons:

- This allows us to maintain our realistic approach in presenting conservative estimates which contain a high degree of confidence, rather than aggressive estimates with lower levels of confidence.
- Geographic radius-based analyses may provide a sufficient basis for visual map examination and/or textual discussion of demographic characteristics, but mathematical visitation estimates are better calculated using more behavior-based drive-time models, as opposed to straight-line distance areas which do not necessarily correspond to driving distance or associated time to destination.
- There must be substantial and plausible overlap of feeder populations in any realistic model for three casinos in Massachusetts, but if and to the extent such feeder regions are expanded, such overlap continues to increase while the certainty or likelihood of cross-visitation declines, again reducing desirable confidence in the model.
- As one examines the northeast regional map and market, both Foxwoods and Mohegan Sun lie either between or closer to the population centers of greater New York and Philadelphia to the southwest and the potential new Massachusetts sites. These sites present a formidable barrier to any significant Massachusetts visitation from greater distance in that direction than we propose herein.

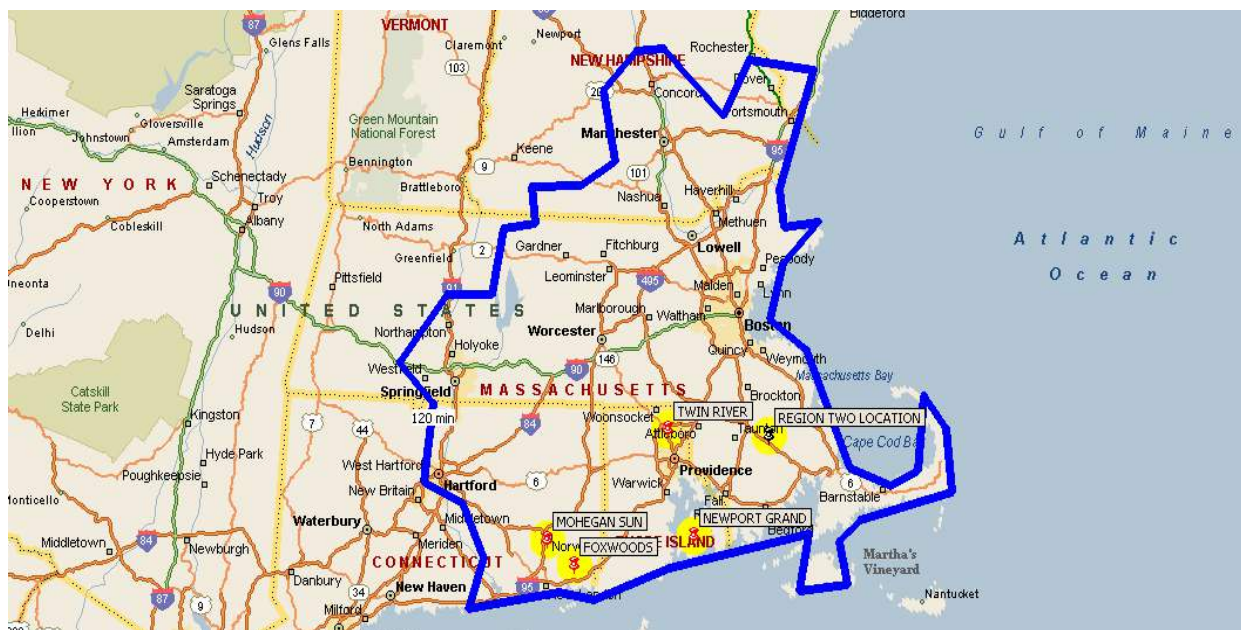
We further examined the entire region for competitors and will discuss the competitors in the next section of this report.

Region 1 is located in the center of Suffolk, Middlesex and Essex counties and has an approximate feeder population of 10.4 million. In the drive time range of two hours, it would directly compete with Foxwoods, Mohegan Sun, Twin River and Newport Grand.



REGION 1 - Two Hour Drive Time Population		
County	State	Population (2006) by County
Hartford	Connecticut	876,927
New London	Connecticut	263,293
Tolland	Connecticut	148,140
Windham	Connecticut	116,872
Cumberland	Maine	202,232
York	Maine	274,598
Barnstable	Massachusetts	224,816
Bristol	Massachusetts	545,379
Essex	Massachusetts	735,958
Franklin	Massachusetts	72,183
Hampden	Massachusetts	460,520
Hampshire	Massachusetts	153,471
Middlesex	Massachusetts	1,467,016
Norfolk	Massachusetts	654,753
Plymouth	Massachusetts	493,623
Suffolk	Massachusetts	687,610
Worcester	Massachusetts	784,992
Belknap	New Hampshire	61,562
Cheshire	New Hampshire	77,393
Hillsborough	New Hampshire	402,789
Merrimack	New Hampshire	148,085
Rockingham	New Hampshire	296,267
Strafford	New Hampshire	119,990
Sullivan	New Hampshire	42,979
Bristol	Rhode Island	52,256
Kent	Rhode Island	170,053
Newport	Rhode Island	82,144
Providence	Rhode Island	635,596
Washington	Rhode Island	127,561
Total		10,379,058

Region 2 is located in the center of Norfolk, Bristol, Plymouth, Nantucket, Dukes and Barnstable counties and has an approximate feeder population of 9.4 million. In the drive time range of two hours, it would directly compete with Foxwoods, Mohegan Sun, Twin River and Newport Grand.



REGION 2 - Two Hour Drive Time Population		
County	State	Population (2006) by County
Hartford	Connecticut	876,927
New London	Connecticut	263,293
Tolland	Connecticut	148,140
Windham	Connecticut	116,872
Barnstable	Massachusetts	224,816
Bristol	Massachusetts	545,379
Dukes	Massachusetts	15,515
Essex	Massachusetts	735,958
Hampden	Massachusetts	460,520
Hampshire	Massachusetts	153,471
Middlesex	Massachusetts	1,467,016
Norfolk	Massachusetts	654,753
Plymouth	Massachusetts	493,623
Suffolk	Massachusetts	687,610
Worcester	Massachusetts	784,992
Hillsborough	New Hampshire	402,789
Rockingham	New Hampshire	296,267
Bristol	Rhode Island	52,256
Kent	Rhode Island	170,053
Newport	Rhode Island	82,144
Providence	Rhode Island	635,596
Washington	Rhode Island	127,561
Total		9,395,551

Region 3 is located in the center of Worcester, Hampshire, Hampden, Franklin and Berkshire counties and has an approximate feeder population of 9.5 million. In the drive time range of two hours, it would directly compete with Foxwoods, Mohegan Sun, Twin River, and Newport Grand, as well as Saratoga Gaming and Raceway.



REGION 3 - Two Hour Drive Time Population		
County	State	Population (2006) by County
Hartford	Connecticut	876,927
Litchfield	Connecticut	190,119
Middlesex	Connecticut	163,774
New Haven	Connecticut	845,244
New London	Connecticut	263,293
Tolland	Connecticut	148,140
Windham	Connecticut	116,872
Berkshire	Massachusetts	131,117
Bristol	Massachusetts	545,379
Franklin	Massachusetts	72,183
Hampden	Massachusetts	460,520
Hampshire	Massachusetts	153,471
Middlesex	Massachusetts	1,467,016
Norfolk	Massachusetts	654,753
Suffolk	Massachusetts	687,610

REGION 3 - Two Hour Drive Time Population		
County	State	Population (2006) by County
Worcester	Massachusetts	784,992
Cheshire	New Hampshire	77,393
Hillsborough	New Hampshire	402,789
Sullivan	New Hampshire	42,979
Albany	New York	297,556
Columbia	New York	62,955
Rensselaer	New York	155,292
Bristol	Rhode Island	52,256
Kent	Rhode Island	170,053
Providence	Rhode Island	635,596
Bennington	Vermont	36,929
Windham	Vermont	43,898
Total		9,539,106

Additionally, we then analyzed the populations of the counties within each region and their associated median incomes. In order to create differentials for our three gaming regions, we utilized the information in the following chart to estimate the gaming spend per adult, with Region 2 offering the highest spend and Region 3 offering the lowest spend per adult.

USA Counties	Resident total population estimate (July 1) 2006	Median household income 2004
Region 1		
Middlesex, MA	1,467,016	\$62,854
Essex, MA	735,958	\$52,050
Suffolk, MA	687,610	\$41,517
Subtotal	2,890,584	
Weighted average		\$55,028
Region 2		
Norfolk, MA	654,753	\$67,066
Bristol, MA	545,379	\$46,986
Plymouth, MA	493,623	\$60,359
Barnstable, MA	224,816	\$50,334
Dukes, MA	15,515	\$51,490
Nantucket, MA	10,240	\$58,525
Subtotal	1,944,326	
Average		\$57,627
Region 3		
Worcester, MA	784,992	\$51,354
Hampden, MA	460,520	\$40,595
Hampshire, MA	153,471	\$48,359
Berkshire, MA	131,117	\$41,589
Franklin, MA	72,183	\$44,393
Subtotal	1,602,283	
Average		\$46,862
MASSACHUSETTS Total	6,437,193	\$53,657

Source: US Census Bureau

Gaming market overview

All three Massachusetts casinos would directly compete with four gaming facilities – including two of the largest and most successful in the United States, Foxwoods and Mohegan Sun – and the Region 3 casino, depending on its ultimate location, might additionally compete with Saratoga Gaming and Raceway in upstate New York. The following table provides the key attributes of each of the competing gaming facilities:

Competitors 2008										
Property	Casino/ Resort Type	# of Slots	# of Tables	# of Hotel Rooms	Restaurants	Theater Seats	Meeting Space	Parking	Smoking	Competitor - MA Region
Newport Grand***	Racino	1,070	n/a	n/a	3	n/a	n/a	yes	Yes	1, 2, 3
Twin River***	Racino	4,701	n/a	n/a	6	2,500	29,000	6,500	Yes	1, 2, 3
Saratoga	Racino	1,770	n/a	n/a	8	n/a	n/a	yes	No	3
Mohegan Sun	Indian full- service resort	6,119	315	1,176**	27	10,710	100,000	13,000	Yes	1, 2, 3
Foxwoods	Indian full- service resort	8,594	453	2,241	28	5,400	200,000	19,000	Yes	1, 2, 3
Average		4,451	384	1,709	14	6,203	109,667	12,833		

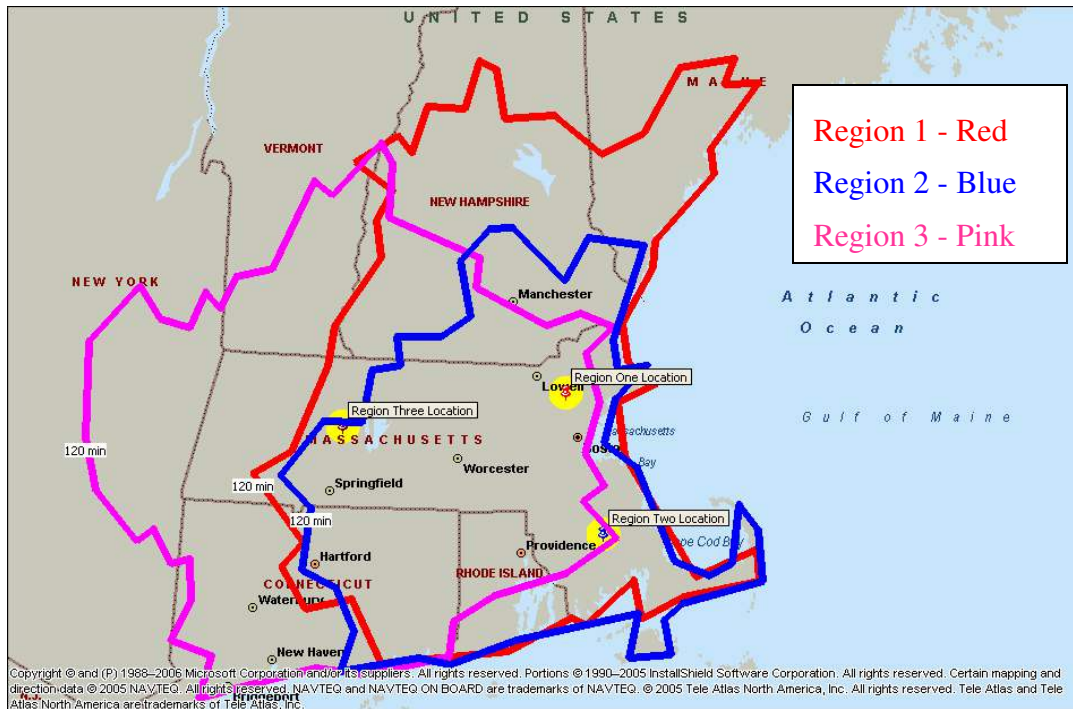
** 1,000 additional rooms in development; *** 2008 expansions in progress

Current competitive landscape

The following section provides an overview of each facility within a 150-mile radius.

Competitors					
Property	Driving Miles from Region 1	Driving Miles from Region 2	Driving Miles from Region 3	# of Slots	Share of Market
Newport Grand	39.5	44.1	120.7	1,070	5.2%
Foxwoods	54.7	89.8	98.4	6,808	33.2%
Mohegan Sun	60.7	95.2	93.9	6,172	30.1%
Twin River	63.9	42.2	82.0	4,701	22.9%
Saratoga	187.6	218.3	129.5	1,770	8.6%
Total				20,521	100%

Along with competition from the existing casino properties, each of the three new destination resort casinos will compete with each other as shown on the following map, which shows the two-hour drive times from the geographic center of each of the three regions:



Project comparison

It is our assumption that the scope of each casino project would initially be:

Massachusetts Casino Project Scope	
Location	Three locations in state
Casino	140,000 sq. ft.
Tables	100
Slots	3,000
Poker	40
Restaurants	Four: Buffet (seats 400); Three-meal coffee shop (seats 250); Specialty -Moderate (seats 175); Deli (seats 175)
Bars/Lounges	2 Lounge (100 seats each); 1 Nightclub (300 seats)
Hotel Rooms	2,000
Event Center/Meeting Space	100,000 sq. ft. event center
Parking Spaces	2,880 spaces
Cost	\$1 - \$1.5 billion
Opening Date	TBD

We compared one individual project to the potential competition in 2010:

Competitors 2010									
Property	Casino/ Resort Type	No. slots	# of Tables	# of Hotel Rooms	Restaurants	Theater Seats	Meeting Space	Parking	Smoking
Newport Grand	Racino	2,100	n/a	n/a	3	n/a	n/a	yes	Yes
Twin River	Racino	4,701	n/a	n/a	6	2,500	29,000	6,500	Yes
Saratoga	Racino	1,770	n/a	n/a	8	n/a	n/a	yes	No
Mohegan Sun	Indian - full- service resort	6,944	377	2,176	32	10,710	100,000	13,000	Yes
Foxwoods	Indian - full- service resort	8,594	453	2,241	28	5,400	200,000	19,000	Yes
Average		4,822	415	2,209	15	6,203	109,667	12,833	
Massachusetts Project		3,000	140	2,000	4	TBD	100,000	2,880	no
Variance to Average		-1,822	-275	-209	-11	n/a	-9,667	-9,953	
% Variance		(37.8)	(66.3)	(9.4%)	(74.0%)	n/a	(8.8%)	(77.6)	

There is overlap in the available populations between the three markets and all markets certainly will compete for a share of consumer discretionary income, but we believe that given the design and amenity plans for each project, combined with the untapped population in the region, there is room in the market for three new projects, but the location and scope of each project will be paramount to their success.

Recapturing gaming dollars

One area of critical interest to Massachusetts' policymakers and residents alike is the issue of repatriating some of the significant gaming dollars that are now spent by Massachusetts adults in other states. Various studies support the notion that Massachusetts is an important feeder market for casinos elsewhere.

As noted earlier, the annual Harrah's Survey projects that Massachusetts generates more than 2 million casino visits annually, and has a gambling participation rate higher than the national average.⁵⁵ Since 2001, Massachusetts has added nearly 200,000 casino gamblers among its adult population – despite the absence of legal casinos in the state.

The Center for Policy Analysis at the University of Massachusetts-Dartmouth reported in 2006 that Massachusetts is an important feeder market for both Connecticut casinos (which we have subsequently confirmed in private conversations with present and former executives at both

⁵⁵ Harrah's Survey 2006, p. 20

properties) and that Massachusetts “indirectly paid \$220.5 million in gaming taxes to Connecticut and Rhode Island in 2006.” The center goes on to suggest that Connecticut and Rhode Island “exported \$71 million in gambling related social costs back to Massachusetts.”⁵⁶ While Spectrum did not confirm that specific estimate, we certainly support the notion that Massachusetts – as a feeder market that does not have its own casino industry, and hence cannot generate tax revenue – is clearly an importer of social costs, and an exporter of casino taxes. The CFPA confirmed the continuing outflow trend for last year, estimating that Massachusetts residents in 2007 contributed \$232.9 million to the combined state coffers of Connecticut and Rhode Island.⁵⁷

Spectrum, using our own methodology, estimates that Massachusetts residents have been spending an estimated \$1.1 billion annually on gaming (alone) in Connecticut and Rhode Island. This estimate is extrapolated from our existing Massachusetts gaming population model, adapted for the out-of-state destinations. This conservative estimate accounts for gaming spending only. The value of other spending dollars such as hotel, retail shopping, entertainment and food/beverage, has not been estimated in the model below which focuses on those counties that we believe would be the primary feeder markets for those nearby states.

Massachusetts Gaming Revenue Outflow

<u>Population (2004) by County</u>	
Bristol	550,668
Franklin	72,431
Hampden	462,756
Hampshire	155,980
Middlesex	1,472,613
Norfolk	655,356
Plymouth	491,878
Suffolk	677,616
Worcester	784,595
Massachusetts total	5,323,893
Estimated adults	3,992,920
Gaming Participation rate	0.28
Annual trip average	6.7
Average trip gaming spend	\$147
Annual total	\$1,101,135,465

Since this model includes areas that are very close to nearby casinos, the participation rate that we use is 28 percent, which is higher than the rate projected by the Harrah’s Survey for the Boston area. Note, however, that participation rates and spending per visit, along with frequency of visitation, often move in inverse directions. Adults who travel greater distances to casino destinations visit less frequently, but tend to stay longer and spend more per visit.

⁵⁶ “Taking the Gamble in Massachusetts,” Clyde Barrow, University of Massachusetts-Dartmouth, 2007

⁵⁷ “New England Casino Gaming - Update, 2008,” CFPA, UMASS – Dartmouth, March 2008, pgs. ii-iii.

Spectrum's moderate- to high-revenue models indicate that, taken together, the three Massachusetts casinos would draw between 54 percent and 65 percent of all Massachusetts gaming trips/spending, or between \$718 million and \$864 million annually. That includes some new Massachusetts-only gaming from the counties farthest from Connecticut according to our models – Berkshire, Essex, Barnstable and Dukes. Discounting those counties, Massachusetts still retains, or reclaims, between \$594 million and \$715 million of the gaming dollars presently leaving the state, or well over half the total now being exported. The substantial balance of the projected Massachusetts total gross gaming revenue – between about \$650 million and \$900 million – will come from outside the state. Overall spending on casino gambling by Massachusetts residents would increase by \$125 million to \$150 million over present levels.

It is important to reiterate that the Connecticut and Rhode Island properties likely will respond to competition from Massachusetts in any number of ways, from adding amenities to increasing promotional spending. Additionally, Massachusetts adults who are longstanding members of loyalty programs in other states have a perceived vested interest in continuing to visit those properties to some degree.

Revenue analysis: policy implications

Our analysis indicates that there is a huge untapped potential of population within a two-hour drive time of each of the three regions and that each region's average median income is well above the U.S. average of \$44,334. That certainly should not be interpreted that each of three casinos will generate the same level of profitability or returns on investment. Clearly, they would not.

The bidding process represents an opportunity for the Commonwealth to foster the climate that would ensure such efforts to maximize revenue would be taken. Applicants should be weighed on factors that include efforts to promote conventions and meetings, as well as other ancillary activities that would ultimately grow revenue.

We caution that our analysis indicates that three properties in Massachusetts would not perform at equal levels, and likely would not justify the same level of capital investment.

It is therefore possible that one or two regions will fail to attract bids that the Commonwealth deems to be in the public interest. With that in mind, it is likely that the stronger bidders would focus their efforts on Region 1, which stands the greatest likelihood of success. Therefore, we recommend a staggered bidding process, focusing on Region 1 as the first license to be awarded. This would allow stronger bidders that are not successful in one region to pursue plans in another.

Review of other Massachusetts gaming revenue projections

Prior Massachusetts gaming revenue estimates and/or commentary reviewed herein:

- University of Massachusetts-Dartmouth, Center for Policy Analysis (CFPA) report "Maximum Bet: A Preliminary Blueprint for Casino Gaming & Economic Development in Massachusetts" March 2007

- Innovation Group study “Massachusetts Gaming Market Potential and Economic Impact Assessment: The Venetian Casino Resort” May 2007
- Suffolk Downs “Report to the Executive Working Group on Gaming” July 2007
- Massachusetts EOHED proposal “Destination Resort Casinos: Creating Jobs, Growing the Economy” October 2007
- Greater Boston Chamber of Commerce-commissioned UHY Advisors FLVS study “Casino Gaming in Massachusetts: An Economic, Fiscal & Social Analysis” March 2008.

The University of Massachusetts-Dartmouth CFPA report “Maximum Bet” is one in a series of surveys and feasibility studies led by Professor Clyde Barrow. This particular report details projections of state and local tax revenues that Massachusetts would derive from, in part, \$1.495 billion in annual casino gross gaming revenue (GGR).

In a letter to Spectrum,⁵⁸ Barrow emphasized that his “Maximum Bet” projections were preliminary and conservative, in anticipation of future, more elaborate modeling by others. He further states that the CFPA’s \$1.5 billion is largely exclusive of existing regional GGR, some of which Massachusetts could conceivably recapture from Connecticut and Rhode Island, which he defines as incremental market upside potential of \$500 million to \$600 million:

“Thus, our estimate of the *market potential* is actually in the \$2.0 to \$2.1 billion range, which is comparable to that estimated by the Governor’s staff and by UHY Advisors. I reiterated this estimate in my oral and written testimony to the Joint Committee on Bonding, Capital Expenditures, and State Assets (12-18-08).”

Note that while the CFPA’s \$500 million to \$600 million recapture estimate is similar to Spectrum’s, we include such revenue capture in our \$1.5 billion total, whereas it is incremental in the CFPA estimate. It is noteworthy that the CFPA’s \$1.495 billion GGR estimate is in line with our moderate case scenario, assuming a lift from the use of hotel rooms as marketing tools.

Note also that Spectrum’s estimates reflect only gross gaming revenues from patrons within approximate two-hour drive-time distances from hypothetical sites, as part of our effort to be both realistic and conservative, and revenues from farther away would be incremental gains to the Spectrum model totals. As noted elsewhere herein, some level of gaming trips to the Massachusetts sites from beyond a two-hour drive will of course occur, as will trips from outside the region. While such visits would provide additive gaming and other revenues, they are simply not quantified in our conservative estimates. A broader drive-time model would also introduce such factors as lower trip frequency, greater competitive trip tendencies between venues, and thus lower degrees of certainty and confidence in the model estimates.

The Innovation Group’s “Venetian” feasibility study details the potential revenues of one very large casino resort as part of a mix that is different from the Spectrum model of three similarly sized resorts. The Venetian casino resort would be located in an east-central location, developed in parallel with only one other full-sized – but smaller – casino in southeast Massachusetts and the installation of slot machines only at the state’s four racetracks. The Venetian revenue projections are modeled on a resort with a 150,000-square-foot casino, 5,000

⁵⁸See full text of letter in Appendix B, Barrow Letter to Spectrum Gaming, May 19, 2008.

slot machines, 350 table games, 2,500 hotel rooms, and more than 1 million square feet of convention and meeting space, all at a cost of \$3 billion.

This would be the largest, by far, of the proposed casinos in any scenario, and substantially larger than the three casinos in the Spectrum model. This difference not only disallows a fully equivalent, or apples-to-apples comparison, but Innovation Group does not extend its modeling to a Massachusetts total for all the new venues, as the Spectrum study does. However, to the extent the two approaches can be compared, on such measures as market demographics, average gaming trip behaviors, etc., the two methodologies produce similar content and results, including:

- Innovation Group estimates about 9.3 million adults within about 150 miles of the east-central Massachusetts site. Spectrum estimates about 9.2 million adults within a two-hour drive of one of three sites.
- Innovation Group estimates about \$353 average gaming win per position per day at the Venetian facility from the above population. We estimate up to about \$346 average daily win per position among the three regional Massachusetts sites.

Despite the differing study parameters, such congruent findings present a measure of cross-validation between the two methodologies. To put these numbers in context, the two Connecticut casinos – with more than 13,000 slot machines combined – generated an average daily win per slot of \$337 over the last 12 months. Mohegan Sun, with more than 6,000 slots generated \$398, while Foxwoods – with more than 7,200 slots – generated \$287. Table data is not publicly available in Connecticut.

The Suffolk Downs proposal was completed with market and feasibility assistance from KlasRobinson Q.E.D. This report was done in support of resort casino development that used different model parameters than the Spectrum study. Its model envisioned two equivalent Massachusetts casinos, each with 5,000 slot machines, 150 table games, and 1,000-room hotels: one development to be added to the existing Suffolk Downs track near downtown Boston, and the other, similar to the second Innovation Group site, to be built on Indian lands in southeast Massachusetts (no other Massachusetts gaming). KlasRobinson Q.E.D. projects the Boston-area site at \$408 average win per gaming position per day, and the southeast at \$303. Taken together, however, KlasRobinson Q.E.D. projects a combined Massachusetts gaming win of \$355 per position daily, quite close to Spectrum's current and Innovation Group's prior estimates.

The Executive Office of Housing and Economic Development (EOHED) referenced a variety of reasonable casino resort examples elsewhere, notably in Connecticut and Atlantic City, in constructing its revenue models. It built reasonable casino capacity and win-per-unit models based on the larger and more successful operations among those in this northeast regional market. The EOHED model, while it borrows implicit demand characteristics from those examples, is not in itself demand-driven, or checked against likely demand characteristics specific to the Massachusetts locations.

Projected consumer spending patterns – given convenient, adequate peak usage supply – should be combined with desirable operator win-per-unit levels to then determine optimal unit capacities for the location and/or market. The Spectrum study performed this additional step. The Innovation Group and the KlasRobinson analyses did so as well, along with other methods. That is a necessary step, as the number of gaming positions should not be viewed as a driver of

demand. Indeed, in a real-world setting, that is a function of demand. The model's total gaming revenue projection of about \$2.05 billion, while entirely possible, may not be the most probable outcome in Year 1.

The EOHED model selected a reasonable daily win per slot machine of \$300, and paired that with feasible inventory of 15,000 slots. It would likely take a combination of factors that are difficult to analyze and project at this early stage – including precise locations, marketing plans, quality of the gaming and non-gaming amenities – to reach this level of revenue within two or three years of operation.

The UHY “Casino Gaming in Massachusetts” analysis, commissioned by the Greater Boston Chamber of Commerce, includes a fairly thorough, macro-focused demand model for Massachusetts gaming revenue. It takes a New England regional or state-by-state approach to existing and likely spending patterns. The study examined factors that are apparent with regard to existing gaming competitors, rather than building a more granular county or ZIP-code based model. The study projects total New England demand for gross gaming revenue in Massachusetts at between \$1.7 billion and \$1.95 billion annually, which is about 13 percent to 30 percent higher than the Spectrum model. This is then augmented by \$300 million to \$350 million additional GGR from outside New England, bringing the total relatively in line with the EOHED projections, if not potentially even higher.

While the Spectrum study does not quantify it, our projections acknowledge that there would likely be some incremental gaming revenue from outside the region.⁵⁹ Other analyses, such as the Innovation Group's work, put that increment at about 6 percent to 7 percent over the regional total. UHY's estimate of a 17 percent to 18 percent increment from outside the region is based in part on data showing that 16 percent of Connecticut's GGR is from “outside New England.” We note, however, that most of that is from neighboring New York, as well as some from New Jersey. Such capture would be difficult to replicate in Massachusetts, which is farther and partially cut off from such markets by Connecticut casinos. The other reason cited by UHY for the Massachusetts increment is that Massachusetts currently enjoys a much higher level of international visitor non-gaming spending than does Connecticut. We concur, as noted in our report, that the robust tourism industry in Massachusetts, including conventions and meetings, would generate greater gaming spends, but this cannot be readily quantified in a conservative revenue model.

New England market: approaching saturation?

A critical question that needs to be addressed is: Is the New England gaming market approaching a saturation point? This question has been prompted, in part, by announcements in 2008 that revenues at existing casinos in Connecticut and Rhode Island have declined.

In response to the slot-revenue decline of more than 6 percent at Foxwoods and Mohegan Sun in the five months ending January 31, University of Connecticut economist Arthur Wright

⁵⁹ It is difficult to quantify such outside revenue, absent information on precise locations, marketing strategies, level of amenities or other factors. Our model is built largely on quantifiable revenue emanating from within New England.

said: “We're getting an indication of market saturation.”⁶⁰ We address that issue, in light of the recent downturn in revenue, with a few key points:

1. Gaming is not recession proof, and is increasingly not recession resistant.
2. Combining Connecticut casinos, Rhode Island racinos and potential Massachusetts casinos into one market scenario is unrealistic and inaccurate, since destination resorts and high-tax racinos operate under different business models, as noted earlier. This means that different markets will have different saturation points, depending on such issues as the variety and quality of their amenities.
3. Market growth is possible beyond what would otherwise be perceived as a limit if destination casinos:
 - a. Expand beyond their traditional core demographic base.
 - b. Increase the frequency of visitation.
 - c. Increase the length of stay.
 - d. Target additional markets, such as tourists and convention attendees.

The notion of gaming as recession-proof or recession-resistant is less true today than at any time in the industry's history, particularly for destination properties. Such properties, by definition, are designed to attract a wide range of customers. The wider the range of customers, the more likely that a property will be buffeted by macro-economic trends.

Historically, the notion that casinos were resistant to such trends could be tied to their relatively small demographic base, and dependence on customers who are gaming-centric in their spending habits, i.e., they view gaming as a serious pastime. Such customers would be less willing to reduce their gaming budgets, and would, in many cases, view casino visitation as value-oriented: They enjoy complimentaries, and have the potential of leaving with more than they came with. Any movement beyond that base will inevitably link the industry more closely to economic trends.

Additionally, we do not know if this present economic downturn will be worse than previous recessions. Economists note, for example, that the current downturn (which, at this writing, cannot be referred to as a recession as it does not meet the definition of a recession, which is two consecutive quarters of a decline in gross domestic product) is more linked to declines in housing prices.⁶¹ Previous recessions, such as the 2000-2001 downturn, were actually ameliorated by rising housing prices. In our view, housing is much more linked to gaming spending than the stock market.

To better understand whether or not additional casino development can be supported, it would be helpful to understand the thought processes that gaming operators use to determine market potential. Revel Entertainment is in the early stages of constructing a \$2 billion casino hotel in Atlantic City that would clearly meet the statutory requirements under consideration in Massachusetts. Revel CEO Kevin DeSanctis made a presentation at the East Coast Gaming Congress in Atlantic City that included the following analysis of the Northeast market:

⁶⁰ “Slot machine revenue drops at N.E. casinos,” by Sean P. Murphy, *Boston Globe*, March 12, 2008

⁶¹ “Just How Bad Will the Economy Get?” MSNBC, March 31, 2008

	No. of Facilities	Positions	Revenue
Atlantic City	11	45,871	\$ 4,920,677,425
Pennsylvania	4	8,683	\$ 768,466,197
Connecticut	2	17,365	\$ 2,499,116,378
Rhode Island	2	5,300	\$ 400,610,454
Delaware	3	7,225	\$ 612,407,100
West Virginia	1	4,765	\$ 463,367,816
New York	7	14,147	\$ 1,045,103,506
Total	30	103,356	\$ 10,709,748,876

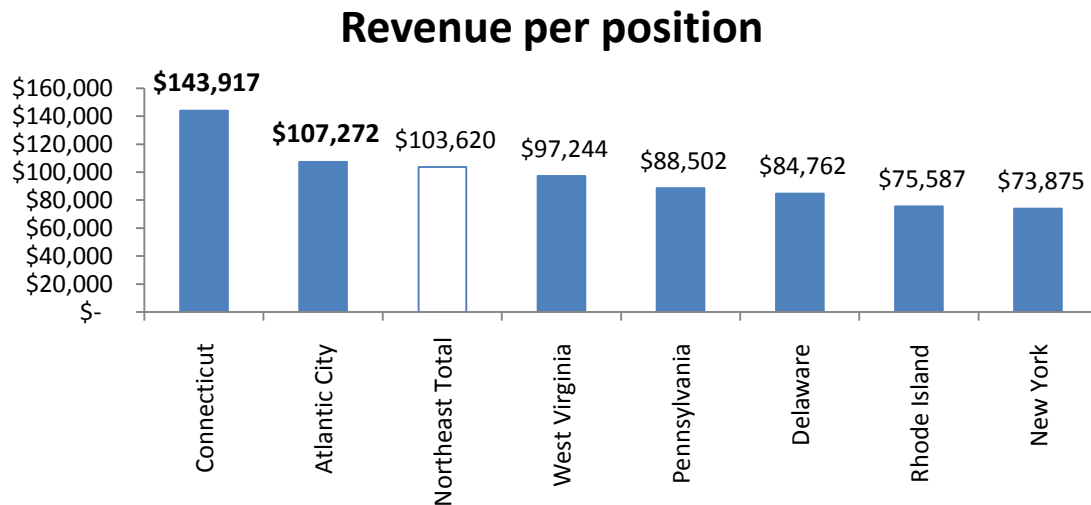
Revel then looked at the potential market in the region, using a 300-mile radius from its site on the Boardwalk in Atlantic City:

Gaming Demand (300-mile Radius)

Adult Population (est. 2011)	47,287,590
Average Participation (%)	33
Frequency (Visits per Year)	6.1
Total Annual Visits	95,189,919
Spend per Visit (\$)	\$145
Gaming Market Potential (\$)	\$13,802,538,207

This analysis would indicate that – at a 33 percent participation rate – the region has approximately \$3 billion in untapped annual gaming potential. Note that, while this is a different market, it would clearly overlap the potential market of any property in Massachusetts, as Boston and Atlantic City are approximately six hours drive time – or about 340 driving miles – from each other.

Taking Revel’s analysis a step further, it supports the point that destination casinos are more likely to attract that untapped market, as they would have significantly greater capital investment in amenities that would appeal to a broader demographic. Using Revel’s numbers, we calculated the level of gaming revenue per position, which shows that destination casinos in low-tax markets generate significantly greater revenue per position.



Indeed, Connecticut and New Jersey are the only states that exceed the regional average, significantly pulling that average up, supporting the point that destination casinos – supported by relatively lower tax rates – are best equipped to capture market share and indeed grow the market.

Clearly, any future Massachusetts destination casinos will face competitive and other challenges, ranging from the potential expansion of gaming in other New England states, as well as in New York, to economic downturns. In our experience, a destination casino can best withstand external economic and competitive forces by targeting additional markets, with a particular focus on conventions and meetings.

We add a cautionary note: While destination casinos largely compete on the basis of their amenities and their ability to successfully target a variety of niche markets, that is not always the case. In Connecticut, for example, the history of competition between Foxwoods and Mohegan Sun has predictably focused on adding hotel rooms, retail and other attractions that essentially grow the market. Massachusetts, however, must anticipate that those properties – as well as more distant properties in Atlantic City – may choose to leverage the financial advantages afforded by their lower tax rates to gain a pricing edge over Massachusetts. This possibility has been built into our conservative revenue projections.

Fiscal, economic impacts of destination casinos

Spectrum worked with the professional staff of the Boston Redevelopment Authority, using advanced modeling tools to analyze and project the economic and fiscal impacts of having up to three casino destinations in Massachusetts.

This analysis includes the use of modeling software developed by Regional Economic Models Inc., which is based in Amherst, Mass. The REMI model is robust, and uses a variety of variables based on economic, demographic, industry and other data to develop outputs.

We developed a number of assumptions in using this model. For example, our scenarios assume that 50 percent of the employment base at casinos would not be competitive with jobs at those of existing industries, as there are no casinos now in Massachusetts. This makes sense intuitively, as many of the casino jobs have counterparts at existing industries, ranging from housekeeping to accounting, while many are clearly unique to this industry. At the same time, we cross-checked this assumption with those of other economic models, such as RIMS II, an input/output model that was developed by the Bureau of Economic Analysis in the U.S. Department of Commerce.

The REMI model generated an employment multiplier of about 1.5, depending on the scenario, which means that every job created in the casino industry generates 0.5 indirect and induced jobs in other industries. Such jobs would be the result of new employment from suppliers to the gaming industry, as well as jobs created by the new spending power of employees. This is clearly in line with a range of RIMS II models that we have used and analyzed in urban, suburban and rural markets throughout the United States.

Other input assumptions for this first scenario are:

- The licensing fee is assumed to be \$200 million, to be renewed every 10 years, resulting in an amortized \$20 million annual cost.
- The hotel tax rate is 5.7 percent for the state, while in such areas as Boston, Worcester, Cambridge and Springfield hotels are charged an additional 2.75 percent to pay off convention center bonds. Boston has an additional 4 percent add-on to hotel rooms. The sales tax rate is 5 percent, with exemptions for food and clothing. For personal income tax, we assume the effective rate is 4.7 percent, which is lower than the state rate but projects some anticipated level of deduction. The income tax in the model is based on total personal income generated.
- The property tax rate used in Region 1 (limited to Suffolk County in this model) is \$25.92 per \$1,000 of assessed value. For the other regions, this ratio was averaged based on differing tax rates, which amounted to \$12.36 in Region 2 and \$18.48 in Region 3.
- We assumed the assessed value of each casino is \$800 million, which we conservatively suggest would be a reasonable net increase in the value of existing property, i.e., not all of the capital investment would be an increase to the assessed valuation of an existing property.
- Staffing for each property is 4,377 positions.
- The property tax credit is based on an assumed \$500 million in gaming revenue per property, assuming 2.5 percent for public health mitigation and an additional 2.5 percent for other mitigation funding. This leaves 22 percent (27 percent minus these allocations) which would be split 50-50 between property tax relief and transportation funding.
- For purposes of our analysis, we assume that none of the government's share of revenue will be used to mitigate any negative impact to the Massachusetts Lottery, as explained in more detail elsewhere in the report.

For the first scenario, for each of three properties, we assumed that gross gaming revenue equates to 65 percent of net revenue.⁶² It assumes a 90 percent occupancy rate for the hotel, and \$92.50 in cash revenue per occupied room night. This is a reasonable set of assumptions for a casino hotel, which would likely operate under a business model that offers complimentary or reduced-rate rooms to gaming customers to generate occupancy and gaming revenue year-round. We will adjust this assumption in some subsequent scenarios.

While the occupancy rate may seem high and the cash revenue per occupied room night might seem low, we are basing this on a casino hotel model, rather than a hotel model. This means that occupancy rates can be inflated by using hotel rooms as marketing tools to reward gaming customers and encourage incremental casino revenue. Such a policy, based on complimentary or reduced-rate room nights, has the concomitant effect of lowering cash revenue per room night.

With those assumptions in mind, our first scenario resulted in the following fiscal impacts:

Scenario 1: Local and State Government Revenue per year

Tax / Fee	Massachusetts	Region 1	Region 2	Region 3	Total Local & State
Licensing fee	\$60,000,000	\$ -	\$ -	\$ -	\$60,000,000
Operational Fee	\$405,000,000	\$ -	\$ -	\$ -	\$405,000,000
Hotel tax (Direct)	\$15,405,000	\$2,430,769	\$2,430,769	\$2,430,769	\$22,697,308
Income tax (Direct)	\$16,930,879	\$ -	\$ -	\$ -	\$16,930,879
Income tax (Indirect and Induced)	\$22,361,121				\$22,361,121
Sales tax (Direct)	\$31,269,231	\$ -	\$ -	\$ -	\$31,269,231
Property Tax (Direct)		\$20,736,000	\$9,888,000	\$14,784,000	\$45,408,000
TOTAL (Direct)	\$528,605,110	\$23,166,769	\$0	\$17,214,769	\$581,305,418
TOTAL (Direct, Indirect and Induced))	\$550,966,231				\$603,666,539

This scenario would generate a direct total of \$581.3 million for government at all levels in Massachusetts, plus an additional \$22.3 million from income taxes generated by the indirect and induced employment. Those totals do not reflect projected net increases to government budgets, as it also includes an estimated \$165 million in property tax relief that would be distributed to Massachusetts residents, an obligation suggested in the proposed legislation. The total net benefit to the public sector and taxpayers equates to about 40 percent of all projected gaming revenue.

That is an important point that must be underscored in this analysis: Any analysis of the economic benefits of gaming must take into consideration tax revenue from all sources, not just the gaming tax.

The following table looks at the economic impacts of three properties, as determined by the REMI model, on Boston and on Massachusetts as a whole. This scenario is in 2007 dollars. Note that three destination casinos, with one in Suffolk County, would create more than 20,000

⁶² Net revenue in gaming equates to total revenue from all sources, net of any complimentary to gaming patrons.

jobs in Massachusetts, and add more than \$2 billion into the economy, as measured by the gross regional product. Boston, as a major metropolitan center, would get an outsized share of the GRP (a measure of the dollars injected into the local economy), but that percentage could shift based on the precise locations of the casinos. “Output,” in the following table, is defined by REMI as “the amount of production, including all intermediate goods purchased as well as value-added (compensation and profit). (It can) also be thought of as sales or supply. The components of Output are Self Supply and Exports (Multi-regions, Rest of Nation, and Rest of World)^[2].”

Scenario 1	Boston	Massachusetts
Employment (direct, indirect and induced)	6,691	20,470
Gross Regional Product	\$ 1,028,657,300	\$ 2,044,928,600
Personal Income (by place of residence)	\$ 101,700,000	\$ 836,000,000
Output	\$ 1,579,215,000	\$ 2,894,608,200

We then performed a sensitivity analysis to determine the relationship between government funding and the success of each casino. The following table shows the difference in the amount of revenue (net of property tax relief payments) that would be generated for the Commonwealth from each casino, based on changes in two important factors:

- The level of annual gaming revenue per casino.
- The ratio of casino revenue to overall net revenue.

Changes in revenue for Commonwealth per casino

Gaming revenue as pct. of total net revenue	Annual gaming revenue per destination casino					
	\$ 500,000,000	\$ 475,000,000	\$ 450,000,000	\$ 425,000,000	\$ 400,000,000	\$ 375,000,000
65%	\$121,242,299	\$116,464,395	\$111,686,491	\$106,908,587	\$102,130,683	\$97,352,779
60%	\$122,538,805	\$117,696,076	\$112,853,347	\$108,010,618	\$103,167,888	\$98,325,159
55%	\$124,071,040	\$119,151,699	\$114,232,358	\$109,313,017	\$104,393,676	\$99,474,335
50%	\$125,909,722	\$120,898,447	\$115,887,172	\$110,875,897	\$105,864,622	\$100,853,347
45%	\$128,156,999	\$123,033,361	\$117,909,722	\$112,786,083	\$107,662,444	\$102,538,805

The table shows that each \$25 million decline in gaming revenue results in a decline of about \$4.8 million in annual revenue for state government. This is less than \$6.75 million, which would be the direct decline in tax revenue based on 27 percent of gross gaming revenue. This softened impact can be attributed to the assumption that a decline in gaming revenue would not lead to a significant decline in employment levels or hotel occupancy, both of which are sources of tax revenue for the Commonwealth.

Note also, however, that state revenue increases markedly, albeit at a lesser rate, as gaming declines as a percentage of overall net revenue. As that percentage declines, it means more overall revenue (the same gaming dollars equate to a relatively lower percentage of a

^[2] Regional Economic Models, Inc. (www.remi.com)

greater revenue base), so the state's share increases as more dollars are spent in restaurants, hotel rooms and other areas.

These two factors – the state's interest in non-gaming revenue and the importance of income taxes and other sources of revenue – clearly support the notion that destination casinos, which offer a variety of amenities and employ more people than convenience-based local casinos, are better positioned to advance the public interest in Massachusetts.

Our second scenario used assumptions that remained unchanged for Region 1. We assumed \$424 million in gaming revenue for Region 2, and \$419 million for Region 3, which would assume they get no material lift in gaming revenue from their hotel rooms.

Scenario 2: Local and State Government Revenue per year

Tax / Fee	Massachusetts	Region 1	Region 2	Region 3	Total Local & State
Licensing fee	\$60,000,000	\$ -	\$ -	\$ -	\$60,000,000
Operational Fee	\$362,810,601	\$ -	\$ -	\$ -	\$362,810,601
Hotel tax (Direct)	\$13,800,240	\$ 2,430,769	\$ 2,062,980	\$ 2,038,908	\$20,332,898
Income tax (Direct)	\$16,930,879	\$ -	\$ -	\$ -	\$16,930,879
Income tax (Indirect and Induced)	\$20,598,621				\$20,598,621
Sales tax (Direct)	\$28,011,873	\$ -	\$ -	\$ -	\$28,011,873
Property Tax (Direct)	\$0	\$20,736,000	\$ 9,888,000	\$14,784,000	\$45,408,000
TOTAL (Direct)	\$481,553,593	\$0	\$0	\$0	\$533,494,251
TOTAL (Direct, Indirect and Induced))	\$502,152,214				\$554,092,872

The hotel tax and income tax revenues remained unchanged in the scenarios, as we assumed the same level of employment and hotel revenue. However, the level of sales taxes generated (since the level of retail and restaurant sales were pegged at a percentage of net revenue), as did the casino revenue tax.

Not surprisingly, government revenue declined overall, since such revenue is tied to the success of the casinos. However, as a percentage of the smaller revenue pie, government revenue increased by about 1 percent.

The following table looks at the economic impacts of three properties, as determined by the REMI model, on Boston and on Massachusetts as a whole in this second scenario.

Scenario 2	Boston	Massachusetts
Employment (direct, indirect and Induced)	6,514	19,600
Gross Regional Product	\$ 1,018,748,500	\$ 1,981,760,000
Personal Income (by place of residence)	\$ 98,910,000	\$ 798,500,000
Output	\$ 1,566,829,000	\$ 2,822,769,400

Note that employment generation goes down, as does the GRP, even in Boston – even though the Region 1 casino would maintain the same level of revenue. This indicates the close

economic ties between regions of Massachusetts to the point where gaming revenues – and tax dollars – generated anywhere will affect employment and economic activity everywhere else.

For the third scenario, we raised the gaming revenue at a Region 1 casino to \$600 million and the average cash per occupied room night to about \$110. Everything else is unchanged from the second scenario:

Scenario 3: Local and State Government Revenue per year

Tax / Fee	Massachusetts	Region 1	Region 2	Region 3	Total Local & State
Licensing fee	\$60,000,000	\$ -	\$ -	\$ -	\$60,000,000
Operational Fee	\$389,810,601	\$ -	\$ -	\$ -	\$389,810,601
Hotel tax (Direct)	\$14,827,240	\$ 2,916,923	\$ 2,062,980	\$ 2,038,908	\$21,846,052
Income tax (Direct)	\$16,930,879	\$ -	\$ -	\$ -	\$16,930,879
Income tax (Indirect and Induced)	\$21,590,321				\$21,590,321
Sales tax (Direct)	\$30,096,488	\$ -	\$ -	\$ -	\$30,096,488
Property Tax (Direct)	\$0	\$20,736,000	\$ 9,888,000	\$14,784,000	\$45,408,000
TOTAL (Direct)	\$511,665,208	\$0	\$0	\$0	\$564,092,020
TOTAL (Direct, Indirect and Induced))	\$533,255,529				\$585,682,341

This resulted in \$585.7 million in total revenue to government at all levels, with an increased share of the dollars inuring to the Boston region.

The following table looks at the economic impacts of three properties, as determined by the REMI model, on Boston and on Massachusetts as a whole in this third scenario.

Scenario 3	Boston	Massachusetts
Employment (direct, indirect and Induced)	6,633	20,090
Gross Regional Product	\$1,025,065,360	\$2,016,440,800
Personal Income (by place of residence)	\$ 100,700,000	\$ 819,600,000
Output	\$1,574,260,600	\$2,861,166,000

That incremental gaming revenue of \$100 million offers a material, but relatively small impact on employment throughout the Commonwealth. The employment at the casino hotels themselves was assumed to be unchanged. This change in employment is largely reflective of other spending, such as government funding, which would lead to increases in employment.

The first three scenarios, as detailed, help illustrate the relationship between gaming revenue and the overall economy, and how changes in certain factors can have a ripple effect.

The next two scenarios were designed to be more conservative in the assumptions, and each assumes an opening in 2013, which would likely be Year 1 for a casino destination in Massachusetts, as noted later in the report. These do not anticipate any material lift in gaming revenue from the use of hotel rooms as marketing tools for casino guests, in part because it takes time to build a database and identify the profitable casino customers.

The fourth scenario closely follows the previous scenario, but we assume significantly less cash business for both the hotel and food-and-beverage. This assumes 90 percent occupancy for the Region 1 property, with 75 percent for the other regions. As expected, the net cash per occupied room night (all the scenarios assume a large number of complimentary room nights for casino customers) is about \$81 for Region 1, and about \$68 for the other regions.

Scenario 4: Local and State Government Revenue per year

Tax / Fee	Massachusetts	Region 1	Region 2	Region 3	Total Local & State
Licensing fee	\$60,000,000	\$ -	\$ -	\$ -	\$60,000,000
Operational Fee	\$389,810,601	\$ -	\$ -	\$ -	\$389,810,601
Hotel tax (Direct)	\$10,764,378	\$ 2,117,647	\$ 1,497,696	\$ 1,480,220	\$15,859,941
Income tax (Direct)	\$16,930,879	\$ -	\$ -	\$ -	\$16,930,879
Income tax (Indirect and Induced)	\$20,471,721				\$20,471,721
Sales tax (Direct)	\$6,369,454	\$ -	\$ -	\$ -	\$6,369,454
Property Tax (Direct)	\$0	\$20,736,000	\$ 9,888,000	\$14,784,000	\$45,408,000
TOTAL (Direct)	\$483,875,312	\$0	\$0	\$0	\$534,378,875
TOTAL (Direct, Indirect and Induced))	\$504,347,033				\$554,850,596

Note that, while many of the projects are unchanged from the previous scenario, the sales and hotel taxes decline dramatically, as these are tied to non-gaming spending. As suggested later in the report, Massachusetts should consider a flat rate per occupied room night, as opposed to a percentage of sales, as a way to ensure a greater revenue stream. The following table shows the economic output from this scenario:

Scenario 4	Boston	Massachusetts
Employment (direct, indirect and Induced)	6,477	19,520
Gross Regional Product	\$ 1,018,748,500	\$ 1,979,282,800
Personal Income (by place of residence)	\$ 98,750,000	\$ 795,800,000
Output	\$ 1,568,067,600	\$ 2,827,723,800

Our fifth scenario should be considered our worst case. We dropped the annual gaming revenue in our Region 1 casino to \$500 million, while leaving the other regions unchanged from the previous scenario. Occupancy for the Region 1 casino dropped to 80 percent, while the cash revenue declined to about \$75 per occupied room night.

Scenario 5: Local and State Government Revenue per year

Tax / Fee	Massachusetts	Region 1	Region 2	Region 3	Total Local & State
Licensing fee	\$60,000,000	\$ -	\$ -	\$ -	\$60,000,000
Operational Fee	\$362,810,601	\$ -	\$ -	\$ -	\$362,810,601
Hotel tax (Direct)	\$10,018,789	\$ 1,764,706	\$ 1,497,696	\$ 1,480,220	\$14,761,412
Income tax (Direct)	\$16,930,879	\$ -	\$ -	\$ -	\$16,930,879
Income tax (Indirect and Induced)	\$19,555,221				\$19,555,221
Sales tax (Direct)	\$5,928,278	\$ -	\$ -	\$ -	\$5,928,278
Property Tax (Direct)	\$0	\$20,736,000	\$ 9,888,000	\$14,784,000	\$45,408,000
TOTAL (Direct)	\$455,688,547	\$0	\$0	\$0	\$505,839,170
TOTAL (Direct, Indirect and Induced))	\$475,243,768				\$525,394,391

Even in this scenario, total government revenue would exceed \$505.6 million in direct revenue, and \$525.4 million in overall revenue. The following table examines the economic outputs:

Scenario 5	Boston	Massachusetts
Employment (direct, indirect and Induced)	6,371	19,070
Gross Regional Product	\$ 1,012,927,080	\$ 1,947,079,200
Personal Income (by place of residence)	\$ 97,090,000	\$ 776,300,000
Output	\$ 1,560,636,000	\$ 2,791,804,400

This scenario shows a reasonable employment multiplier of 1.45, assuming 4,377 direct positions.

Our final scenario essentially mirrors the core assumptions in our moderate revenue projections, assuming a reasonable lift in gaming revenue from the use of hotel rooms as marketing tools. The gaming revenue assumptions are \$542.1 million for Region 1, \$526.8 million for Region 2 and \$432.7 million for Region 3.

Note that we conservatively project that casino revenues would amount to 75 percent of net revenue for all three projects:

Scenario 6: Local and State Government Revenue per year

Tax / Fee	Massachusetts	Region 1	Region 2	Region 3	Total Local & State
Licensing fee	\$60,000,000	\$ -	\$ -	\$ -	\$60,000,000
Operational Fee	\$405,432,000	\$ -	\$ -	\$ -	\$405,432,000
Hotel tax (Direct)	\$13,365,241	\$2,284,048	\$2,219,584	\$1,823,109	\$19,691,982
Income tax (Direct)	\$16,930,879	\$ -	\$ -	\$ -	\$16,930,879
Income tax (Indirect and Induced)	\$22,097,921				\$22,097,921
Sales tax (Direct)	\$27,128,907	\$ -	\$ -	\$ -	\$27,128,907
Property Tax (Direct)	\$0	\$20,736,000	\$9,888,000	\$14,784,000	\$45,408,000
TOTAL (Direct)	\$522,857,027	\$23,020,048	\$12,107,584	\$16,607,109	\$574,591,768
TOTAL (Direct, Indirect and Induced))	\$544,954,948				\$596,689,689

The economic impacts are:

Scenario 6	Boston	Massachusetts
Employment (direct, indirect and Induced)	6,657	20,330
Gross Regional Product	\$ 1,027,170,980	\$ 2,036,258,400
Personal Income (by place of residence)	\$ 101,300,000	\$ 830,400,000
Output	\$ 1,577,976,400	\$ 2,887,176,600

The scenario shows that the three casinos would generate government revenue (including funds to be distributed as property tax relief) equaling 39.7 percent of gaming revenue.

This scenario, based on our moderate revenue model, is also quite similar to the first scenario we ran, but shifts more gaming revenue to Region 1. At the same time, it is more conservative in that it assumes gaming plays a much larger role in the overall revenue projections. With that in mind, Spectrum suggests that this is a likely, supportable scenario.

Construction impacts

For purposes of estimating the impact of construction work on the economy, we are assuming 3,000 direct jobs, a number affirmed by a methodology suggested by Perini Building Company and by the actual number of construction jobs created by the initial building of Borgata Hotel, Casino & Spa in Atlantic City. We also assumed:

- Local construction companies in each region would oversee the work.
- Estimates are in 2007 dollars.
- Construction period is assumed to be three years, starting in 2010.
- Employment is annualized over the three-year period.

The REMI model, which broke the impacts down into the Boston area and statewide, reported the following results for three properties:

	Boston	Massachusetts
Employment	4,749	16,760
Construction	2,296	7,321
Professional Services	1,008	2,991
Other	1,444	6,447
Gross Regional Product	\$ 1,862,869,810	\$ 4,744,965,500
Personal Income (by place of resident)	\$ 593,900,000	\$ 3,347,000,000
Output	\$ 3,104,337,480	\$ 7,903,010,400
Wage & Salary Disbursements (by place of work)		\$ 2,922,100,000
Income Tax Revenue		\$ 137,338,700

Construction employment would include all those workers on-site, while professional services would include support personnel and others, such as architects and designers. The “other” category would include all spin-off employment generated by the construction work.

Note that the model projects more actual construction work than what would be generated at the casino properties. That clearly makes sense, in our experience, as gaming will likely lead to additional capital investment in surrounding businesses, among other impacts.

IRR, NPV analysis

The creation of casinos in Massachusetts cannot succeed unless there is clear goal congruence between the public and private sectors. In part, this means that the Commonwealth benefits when casino operators invest in their facilities and generate an acceptable return on that investment. This part of our analysis examines a range of potential returns based on our projections. We examined returns from both an operational and a financial standpoint.

From an operational standpoint, the two key variables that we examined were the potential margins and projected net revenue. The margins are determined by EBITDA (earnings before interest, taxes, depreciation and amortization) as a percentage of net revenue.

From a financial standpoint, the two key variables that we examined are the discount rate, which is used to determine the present value of future cash flows, and the Year 6 multiplier used to determine the potential market value of a project at the end of this period.

The multiplier – the inverse of the capitalization rate – projects the ratio of dollars invested to dollars earned, and reflects the market value of a project. It translates into how many dollars a potential buyer or investor would be willing to invest at a future point for every \$1 in potential earnings.

The discount rate would reflect either the weighted average cost of capital or the “hurdle rate” – that is, the average return on invested capital – which projects would have to achieve to justify an investment.

Based upon our collective industry experience, and discussions with gaming industry leaders and decision-makers, a realistic hurdle rate for return on new capital investment would be

15 percent. Therefore, any proposed investment of capital that would yield results below this figure would most likely not occur in Massachusetts.

This 15 percent hurdle rate is supported by recent experience. For example, we examined the most recent new casino hotel project constructed in Atlantic City, the Borgata, which opened in July 2003. Through the first three years of operations (first three years reflect results prior to ongoing expansions throughout the facility), Borgata generated an average annual return on invested capital (ROIC) of 18.9 percent. This 18.9 percent clearly justifies the use of a 15 percent hurdle rate.

Any investor considering Massachusetts would likely examine the potential net present value (NPV) of any future cash flow or other income stream, as well as the internal rate of return (IRR) which measures the effective discount rate if the NPV was set at zero, i.e., the present value of future cash flows or other income streams equaled the value of cash outflows. A positive NPV could lead to a potential decision to invest, as could an IRR that exceeds either the hurdle rate or the weighted average cost of capital.

Our first scenario for a hypothetical Massachusetts casino assumes that an operator makes the minimum investment required by the proposed legislation: \$1 billion, net of any land acquisition costs. We assumed that would equate to a total investment of \$1.1 billion, with at least \$1 billion of eligibility toward the legislative requirement.

We assume also, for purposes of this model, that gaming revenue equates to 65 percent of net revenue. Year 1 gaming revenue equals 80 percent of Year 3 gaming revenue, while Year 2 equals 90 percent. After Year 3, growth continues at a 3 percent annual growth rate.

We examined changes in two key variables: the EBITDA margin and the level of Year 3 gross gaming revenue. The following table examines the IRR based on changes in those variables:

IRR outcomes

		EBITDA margins						
Gross gaming revenue (in millions), Year 3		20%	21%	22%	23%	24%	25%	26%
	\$ 450	9%	10%	11%	12%	13%	14%	15%
	\$ 500	11%	13%	14%	15%	16%	17%	18%
	\$ 550	14%	15%	16%	18%	19%	20%	21%
	\$ 600	16%	17%	19%	20%	21%	22%	23%
	\$ 650	18%	20%	21%	22%	23%	25%	26%
	\$ 700	20%	22%	23%	24%	26%	27%	28%
	\$ 750	22%	24%	25%	27%	28%	29%	30%

Note that an investment of \$1.1 billion would likely be justified under these various scenarios, based on a minimum IRR of 15 percent.

We then examined the potential IRR, using the same projected gaming revenues but changing the level of capital investment.

IRR outcomes

		Total capital investment (in millions)						
		\$ 1,100	\$ 1,200	\$ 1,300	\$ 1,400	\$ 1,500	\$ 1,600	\$ 1,700
Gross gaming revenue (in millions), Year 3	\$ 450	14%	12%	10%	8%	7%	5%	4%
	\$ 500	17%	15%	13%	11%	9%	8%	6%
	\$ 550	20%	17%	15%	13%	12%	10%	9%
	\$ 600	22%	20%	18%	16%	14%	12%	11%
	\$ 650	25%	22%	20%	18%	16%	14%	13%
	\$ 700	27%	24%	22%	20%	18%	16%	15%
	\$ 750	29%	26%	24%	22%	20%	18%	16%

Under this scenario (which assumes a 25 percent EBITDA margin), the IRR diminishes markedly as the level of capital investment increases. Note that, at an investment level of \$1.5 billion, the gaming revenue would have to exceed \$600 million to reach an acceptable IRR at a 25 percent EBITDA margin.

We then examined the same levels of investment, while assuming Year 3 gaming revenue of \$500 million, by adjusting the margins:

IRR outcomes

		Total capital investment (in millions)						
		\$ 1,100	\$ 1,200	\$ 1,300	\$ 1,400	\$ 1,500	\$ 1,600	\$ 1,700
EBITDA margins	23%	15%	13%	11%	9%	7%	6%	5%
	24%	16%	14%	12%	10%	8%	7%	5%
	25%	17%	15%	13%	11%	9%	8%	6%
	26%	18%	16%	14%	12%	10%	9%	7%
	27%	19%	17%	15%	13%	11%	10%	8%
	28%	20%	18%	16%	14%	12%	10%	9%
	29%	21%	19%	17%	15%	13%	11%	10%

This table demonstrates that greater investment would be more difficult to justify unless either gaming revenue or EBITDA margins (which are a function of many factors, including the gaming tax rate) increase significantly. For example, if Year 3 gaming revenues are \$500 million, the EBITDA margin would have to reach 31 percent to justify a \$1.5 billion investment.

We then examined the potential NPV based on a \$1.5 billion investment, and Year 3 gaming revenue of \$600 million. The two variables that we examined include the discount rate, which would in this instance be the weighted average cost of capital for a developer, and the terminal value multiplier, which would be the multiple of earnings that a property would theoretically command in Year 6.

NPV outcomes (\$ in millions)

		Terminal value multiplier					
		4	5	6	7	8	9
Discount rate	14.0%	\$ (307)	\$ (196)	\$ (84)	\$ 27	\$ 139	\$ 250
	14.5%	\$ (328)	\$ (220)	\$ (111)	\$ (2)	\$ 106	\$ 215
	15.0%	\$ (349)	\$ (243)	\$ (137)	\$ (31)	\$ 75	\$ 181
	15.5%	\$ (369)	\$ (265)	\$ (162)	\$ (59)	\$ 44	\$ 147
	16.0%	\$ (388)	\$ (287)	\$ (187)	\$ (86)	\$ 14	\$ 115
	16.5%	\$ (407)	\$ (309)	\$ (211)	\$ (113)	\$ (15)	\$ 83
	17.0%	\$ (425)	\$ (330)	\$ (234)	\$ (139)	\$ (43)	\$ 52

The table shows that operators with a higher cost of capital are less likely to generate the necessary cash flows in that scenario to justify an investment at that level. When we reduced the assumed capital investment to \$1.1 billion, it resulted in the following:

NPV outcomes (\$ in millions)

		Terminal value multiplier					
		4	5	6	7	8	9
Discount rate	14.0%	\$ 93	\$ 204	\$ 316	\$ 427	\$ 539	\$ 650
	14.5%	\$ 72	\$ 180	\$ 289	\$ 398	\$ 506	\$ 615
	15.0%	\$ 51	\$ 157	\$ 263	\$ 369	\$ 475	\$ 581
	15.5%	\$ 31	\$ 135	\$ 238	\$ 341	\$ 444	\$ 547
	16.0%	\$ 12	\$ 113	\$ 213	\$ 314	\$ 414	\$ 515
	16.5%	\$ (7)	\$ 91	\$ 189	\$ 287	\$ 385	\$ 483
	17.0%	\$ (25)	\$ 70	\$ 166	\$ 261	\$ 357	\$ 452

The implications in this section of the analysis are that acceptable returns on investment are going to require a combination of strong gaming revenues, operational efficiencies and a relatively low cost of capital. This effectively means that the major gaming operators – who possess the experience, the national databases and the more powerful brands – would be best positioned to succeed, particularly in regions 2 and 3. Since Region 1 offers the greatest potential profitability, it could be in the best interests of the Commonwealth to stagger the bidding process to allow such operators additional opportunities to participate in Massachusetts.

Revenue optimization

The previous sections underscored the public-policy rationale behind the establishment of destination casinos at a tax rate of 27 percent, rather than following the model used in Pennsylvania, New York and other states to establish casinos that operate at significantly higher tax rates:

- The lower tax rates allow for a greater return on investment, and thus justify more amenities that will result in more employment and greater capital investment.
- Because such destination properties have more amenities, they will generate more gaming revenue (by attracting a broader demographic, by increasing the frequency and length of visitation and by being more attractive to better customers.)
- Such destinations will also prove less vulnerable to expanded competition, and better positioned to capture gaming dollars now going to other markets in New England.
- Destinations are better positioned to generate revenue from more sources, thus capturing more overall tax dollars.
- Destinations result in greater direct employment.

Note, for example, in the earlier scenario, that total government revenue, including the funding for property tax relief, was \$525.4 million, or 39 percent of gaming revenue. Would the Commonwealth realize more revenue if it simply raised the tax rate to, say, 39 percent? No, because gaming revenue would likely be lower, or at least more vulnerable to being captured by other states that have lower tax rates. The returns on investment would be lower as well, due to the higher tax rate, and thus the properties would not be able to justify capital investment that would lead to greater employment and overall spending.

In the 11 states with commercial casinos in operation in 2007, commercial casinos contributed more than \$5.8 billion in tax revenue to state and local governments, an 11.3 percent increase over 2005 data and in the 11 states with racetrack casinos in operation in 2007, racetrack casinos contributed more than \$2.22 billion in tax revenue to state and local governments, a 54.6 percent increase over 2006 data as shown in the following tables:⁶³

2007 Commercial Casino Tax Revenue	
Colorado	\$115.4 million
Illinois	\$833.9 million
Indiana	\$842.0 million
Iowa	\$314.8 million
Louisiana	\$559.3 million
Michigan	\$365.6 million
Mississippi	\$350.4 million
Missouri	\$417.3 million
Nevada	\$1.034 billion
New Jersey	\$474.7 million
South Dakota	\$14.9 million
TOTAL	\$5.8 billion
<i>Source: American Gaming Association and State Gaming Regulatory Agencies</i>	

⁶³ American Gaming Association, State of the States 2008

2007 Racetrack Casino Tax Revenue	
Delaware	\$216.63 million
Florida	\$101.15 million
Iowa	\$109.90 million
Louisiana	\$68.15 million
Maine	\$20.59 million
New Mexico	\$63.64 million
New York	\$449.90 million
Oklahoma	\$10.17 million
Pennsylvania	\$461.07 million
Rhode Island	\$283.61 million
West Virginia	\$439.94 million
TOTAL	\$2.22 billion
<i>Source: American Gaming Association and State Gaming Regulatory Agencies</i>	

Tax revenue for states with legalized gaming varies significantly from state to state. For the commercial casinos, from riverboat admissions fees of \$2 per person in Indiana and \$3 per person in Missouri to graduated tax rates of up to 50 percent on gross gambling revenue in Illinois, all states utilize some formulation to tax gross gambling revenue, with higher-tax rates often associated with the absence of other taxes and or fees. Additionally, many states supplement the tax on gross gaming revenues with additional taxes or fees on the non-gaming amenities. In New Jersey, for example, the state assesses casinos a \$3 per day fee for any parked car, \$3 per day for each hotel room occupied, and an added tax on cash retail sales of alcoholic beverages, at 3 percent, and on other taxable items, at 9 percent. We must note that New Jersey also pays one of the lowest gross gaming tax rates in the United States at 8 percent, not including the required reinvestment fee.

As there is a wide range of formulation for the tax structures in each state, there is an equally wide range of spend, with many states earmarking funds to assist with education, local government and the social costs associated with gambling. The table below compares the details for each state with commercial casinos:

2007 Commercial Casino Tax Comparison				
State	Gaming Format	2007 Casino Tax Revenue	How Taxes Spent	State Gaming Tax Rate
Colorado	Land-based (limited stakes)	\$115.4 million	Local communities, historic preservation, general fund	Graduated tax rate with a maximum tax of 20% on gaming revenue
Illinois	Riverboat	\$833.9 million	Education assistance, local government	Graduated tax rate from 15% to 50% of gross gaming revenue, \$2-3 per patron admissions tax
Indiana	Riverboat, dockside and land-based casinos	\$842.0 million	Economic development, local government	Graduated tax rate from 15% to 35% of gross gaming revenue, \$3 per patron admissions tax
Iowa	Riverboat, racetrack and land-based casinos	\$314.8 million	Infrastructure improvements, local government, general fund, schools and universities, the environment	Graduated tax rate with a maximum tax of up to 22% on gross gaming revenue at riverboats and up to 24% at racetracks with slots and table games
Louisiana	Riverboat, land-based, racetrack casino	\$559.3 million	General fund, city of New Orleans, public retirement systems, state capitol improvements, rainy day fund	Riverboat casinos: 21.5% Land-based casino: \$60 million annual tax or 21.5% of gross gaming revenue, whichever is greater Racetrack casinos: 18.5% tax on gross gaming revenue, 18% of net revenue paid to horsemen, 4% of the above net revenue then paid to local parish
Michigan	Land-based	\$365.6 million	Public safety, capital improvements, youth programs, tax relief, neighborhood development and improvement, infrastructure repair and improvement	24% tax on gross gaming revenue (11.9% to city of Detroit, 12.1% to state of Michigan)
Mississippi	Dockside, land-based	\$350.4 million	Housing, education, transportation, health care services, youth counseling programs	Graduated tax rate on first \$134,000 of gaming revenue, with all subsequent gaming revenue taxed at 8%; up to 4% additional tax on gaming revenues may be imposed by local governments
Missouri	Riverboat (continuous boarding)	\$417.3 million	Education, local public safety programs, disordered gambling treatment, veterans' programs, early childhood programs	20% tax on gross gaming revenue, \$2 per patron admission fee, per excursion, split between home dock community and the state
Nevada	Land-based	\$1.034 billion	Education, local governments, general fund, problem gambling programs	Graduated tax rate with a maximum tax of 6.75% on gross gaming revenue; additional fees and levies may be imposed by counties, municipalities and the state adding approximately 1% to the tax burden
New Jersey	Land-based	\$474.7 million	Senior citizens, disabled, economic revitalization programs	8% tax on gross gaming revenue, plus a community investment alternative obligation of 1.25% of gross gaming revenue (or an investment alternative 2.5% on gross gaming revenue); 4.25% tax on casino compliments
South Dakota	Land-based (limited-stakes; \$100 maximum bet)	\$14.9 million	40% Department of Tourism, 10% Lawrence County, 50% commission fund	8% tax on gross gaming revenue, gaming device tax of \$2,000 per machine per year
TOTAL		\$5.8 billion		
Source: American Gaming Association and State Gaming Regulatory Agencies				

For the 11 states with racetrack casinos, although the distributions to state and local governments is derived from a formula based on percentage of revenue retained by operator, the percentage varies greatly by the state, up to 76 percent in Iowa, which has non-profit and privately run racetracks. New York amended its law in February 2008, and has increased the percentage retained by operator to between 32 and 42 percent, depending on the number of machines, population within a 40-mile radius, and/or whether the location is within 15 miles of an Indian casino.

Many of these states earmark their funds for the general fund, however many also contribute to education, local government, purses and the social costs associated with gambling. The table below compares the details for each state with racetrack casinos:

2007 Racetrack Casino Tax Comparison				
State	Gaming Format	2007 Distributions to State/Local Government	How Taxes Spent	Percentage of Revenue Retained by Operator
Delaware	Racetrack - Publicly run video lottery terminals with distributions to operators	\$216.63 million	General fund	48%
Florida	Racetrack - Privately operated facilities with slot machines	\$101.15 million	Statewide education	50%
Iowa	Racetrack - Nonprofit and privately operated facilities with slot machines and table games	\$109.90 million	Infrastructure improvements, local government, general fund, schools and universities, the environment	76.30%
Louisiana	Racetrack - Privately operated facilities with slot machines	\$68.15 million	General fund, purses and local parishes	63.60%
Maine	Racetrack - Privately operated facilities with slot machines	\$20.59 million	Education, health care, agriculture and gambling control board administration	51.80%
New Mexico	Racetrack - Privately operated facilities with slot machines	\$63.64 million	General fund, problem gambling treatment	54.75%
New York	Racetrack - Publicly run video lottery terminals with distributions to operators	\$449.90 million	Public education	35.2%*
Oklahoma	Racetrack - Privately operated facilities with slot machines	\$10.17 million	Education and purses	59%
Pennsylvania	Racetrack - Privately operated facilities with slot machines	\$461.07 million	Property tax relief, economic development, tourism, horse racing industry, host local government	45%
Rhode Island	Racetrack - Publicly run video lottery terminals with distributions to operators	\$283.61 million	General fund	27.60%
West Virginia	Racetrack - Publicly run video lottery terminals with distributions to operators	\$439.94 million	Education, senior citizens and tourism	42.40%
TOTAL		\$2.22 billion		
Source: American Gaming Association and State Gaming Regulatory Agencies				
*NY Bill A09998 amended the law on 2/13/08 to increase the % retained by operator up to 42%, depending on machine numbers, population and location				

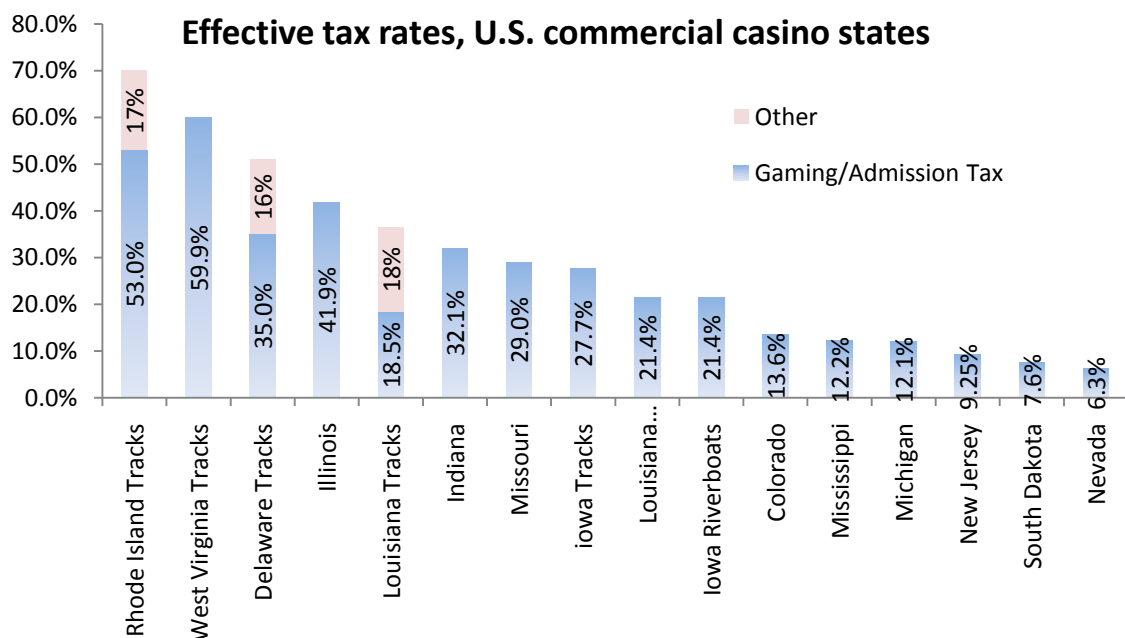
Pennsylvania, like many other states, went through a long political battle over the potential legalization of gaming. It finally crafted legislation authorizing slot machines at 14

venues, seven of which are tracks, five are non-track parlors, and two are resort-based locations. Slots licensees pay 34 percent of their gross revenue to the state, with most proceeds going to the property-tax relief fund. The remaining funds will also go to aid the horseracing industry (12 percent), local communities that host slots to create programs to prevent and treat compulsive gambling facilities, and to economic and tourism development (5 percent). Track and non-track licensees pay a \$50 million fee up front to operate slots, while resort licensees pay a \$5 million fee.

Pennsylvania chose to limit competition and gaming development, thereby justifying a higher gaming tax rate. And, although Pennsylvania has an effective tax rate of 55 percent, it chose to exclude non-cash wagers and promotional credits from the tax calculation, giving the operators a mitigating differential over their neighboring operators in New Jersey who pay tax, albeit at a much lower rate, on non-cash wagers and promotional credits.

Relationship between tax rates, license fees, and capital investment:

The following chart was presented by Gary Loveman, chairman, president and chief executive officer of Harrah's Entertainment, at the East Coast Gaming Congress in Atlantic City on May 20, 2008:



Source: Harrah's Entertainment

Similar to most other industries, in the gaming business there is a direct inverse relationship between revenue tax rates and profitability margins as well as rates of return on investment. Higher such taxes then of course tend to suppress levels of capital spending by developer-operators, and relatively lower tax rates tend to encourage increased capital outlays.

Initial license fees required of successful development bidders are generally viewed as part of their capital investments and therefore:

- Have a detractive effect on capital development spend, as the licensing expense competes internally for capital with construction spending.
- Pose a dampening effect on development interest among potential candidates, as the fees raise the cost of entry with no direct return on that expense, and thereby simultaneously reduce projected ROIC rates.

This is not to say government entities should not impose substantial operator license fees, to both winnow out under-resourced bidders and help recoup the state's own start-up and other infrastructure costs, but rather to make clear the underlying considerations.

At a \$200 million minimum bid, the Massachusetts casino licensing fee, combined with the minimum development requirements, will ensure that only financially strong companies will apply. On the other hand, this is potentially \$200 million less in capital invested into each of the destination casinos. This fee could be viewed by both the state and license applicants as the price of operating in a closed, geographically protected environment.

Massachusetts is continuing an emerging trend among states of charging a significant one-time, flat-rate licensing or privilege fee, and its effective yearly rate would place it near the top of the list of such states:

- Indiana: \$250 million one-time licensing fee for racinos
- Massachusetts: \$200 million licensing fee for 10 years; based on discussions with the governor's administration, we believe this is contemplated to be a one-time fee
- Pennsylvania: \$50 million one-time licensing fee
- Kansas: \$25 million one-time privilege fee

We note that one prospective Massachusetts gaming operator said that the Commonwealth "could reasonably command \$800 million in total license fees" (for three casinos) and was "prepared to pay our proportionate share."⁶⁴ A financial adviser for this operator further said that paying its share of \$800 million in total licensing fees is "reasonable given the proposed exclusivity of operation in return."⁶⁵

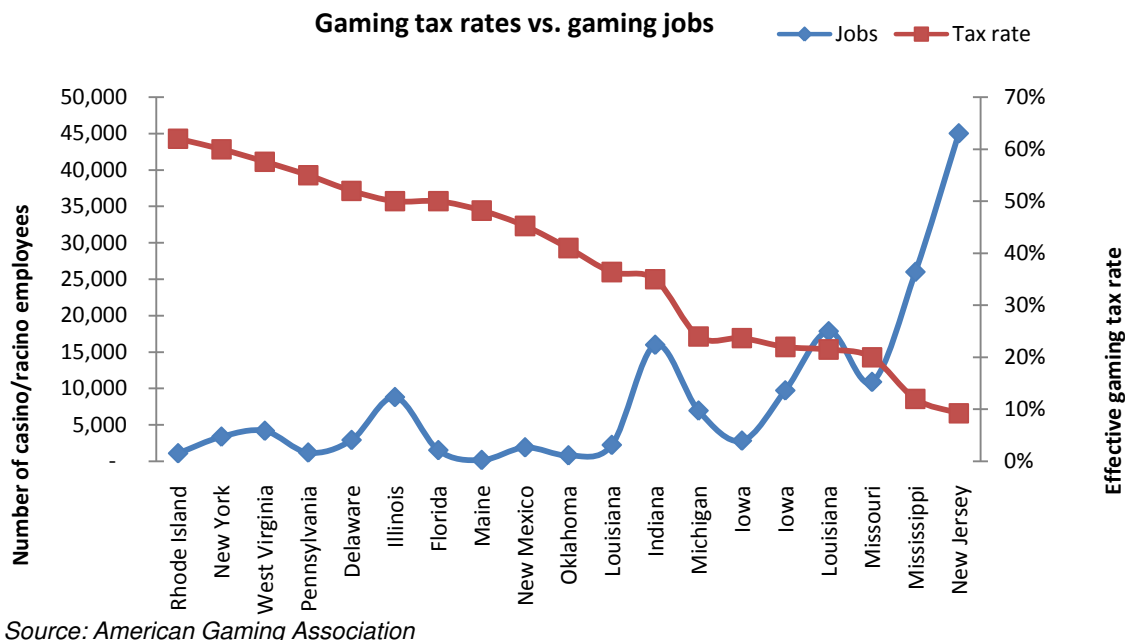
Ongoing gaming tax rates, however, are seen as the more important determinant of initial and future capital investment by operators. Philadelphia vs. Atlantic City provides a good case study. The more highly taxed eastern Pennsylvania properties are, aside from their racetrack operations, essentially slot machine venues enhanced only by sufficient food and beverage offerings to service their customers. In Atlantic City, meanwhile, existing casino operators – without even considering new or proposed casinos – are spending, or in the last three years have spent, roughly \$2 billion for additional hotel towers, retail centers, restaurants, bars, nightclubs, swimming pools, spas, casino expansions and other amenities.

⁶⁴ Letter from Richard Fields, Chairman and CEO, Coastal Development LLC (owner of Suffolk Downs), to Daniel O'Connell, Secretary, Massachusetts Office of Housing and Economic Development, December 14, 2007.

⁶⁵ Letter from John Thompson, Managing Director, Normandy Financial LLC, to Richard Fields, Chairman and CEO, Coastal Development LLC, December 14, 2007,

While due in part to legislative limits on allowed forms of gaming in Pennsylvania, the difference between the capital investment – and thus the types and range of amenities – in the two states is due chiefly to their respective tax structures. The proposed Massachusetts model, although it would not fall in the “low tax” end of the gaming industry tax spectrum, is closer to that of New Jersey (8 percent) than Pennsylvania (55 percent). Such product development also brings with it more collateral visitor spending, as well as broader local employment than has been in high-tax states such as Pennsylvania.

The following chart illustrates the clear, albeit imperfect relationship between tax rates and employment:



Note that Nevada – which had the lowest tax rate, at 6.75 percent, and the most employees, at more than 215,000 – is not included above, as its data would be literally off the chart.

Tax policy implications

At 27 percent, Massachusetts would not have the lowest gaming tax in the country, but would be competitive. Operators could realize an acceptable return on investment, as noted earlier. Still, we caution that the proposed rate would put Massachusetts casinos at a material disadvantage against their most direct competitors in Connecticut, as well as against some more distant competitors in New Jersey and elsewhere.

Connecticut tribal casinos pay 25 percent of slot revenue to the state, and pay no state taxes or fees on table games revenue. That 2 percent differential on slot revenue could allow Connecticut casinos to competitively lower the hold percentage on their slots, thus making them more attractive to players. The severe differential on table revenue could prove to be a particularly powerful competitive weapon for Connecticut casinos in the high-end table market.

We do not suggest that Massachusetts lower the rate further, as we acknowledge that there are likely political considerations at play that have determined that 27 percent is an

acceptable floor for tax rates. The legislation, however, would apparently allow bidders to compete on the basis of their gaming tax rate. Still, we caution that – if 27 percent remains the minimum tax rate – regulators should highly scrutinize any bids that attempt to win licensure by promoting higher rates. As we have noted, higher rates would likely result in less investment, fewer jobs and potentially less overall gaming revenue.

Potential impact on Massachusetts Lottery

To allay fears that casinos would negatively impact the highly successful Massachusetts Lottery, the proposed legislation would guarantee a growth rate of 3 percent in net profits, or the amount each year that is deposited into a special fund distributed to municipalities in Massachusetts. The ability of the proposed legislation to fund all of its programs is largely dependent on how much casino revenue will be needed to generate that growth rate of 3 percent. The more that is needed means there is that much less to pay for property tax relief and transportation improvements, the two main recipients of casino revenue.

Five percent of gross gaming revenue would be distributed to community and public health mitigation funds. Additional funds would then be used to assist the Lottery, and whatever is left would be split evenly between tax relief and transportation improvements. The administration's analysis – based on projected casino revenue of \$2.05 billion – expects to contribute \$200 million each for transportation and property tax relief, after funding \$51 for lottery mitigation.

The Massachusetts Lottery guaranteed funding level is computed by taking the 2003-2007 annual average of “the total amounts deposited in the state lottery fund.” That number would then be increased each year by 3 percent. Once all three casinos are open, the administration expects to spend no more than \$51 million on lottery mitigation. Other studies, which will be discussed later in this report, estimate the figure to be much higher.

Even without casinos, it may be difficult for the Lottery to generate 3 percent growth. From 2000 to 2007, the average annual growth rate was less than 1 percent. In fiscal 2007, net profit fell by nearly 5 percent. The figure is expected to increase this year by about 3 percent, as noted in the following table:

Year	Massachusetts Lottery, annual net profit (in millions)	Percent change
2000	\$ 853	
2001	\$ 864	1.3%
2002	\$ 899	4.1%
2003	\$ 889	-1.1%
2004	\$ 912	2.6%
2005	\$ 936	2.6%
2006	\$ 951	1.6%
2007	\$ 892	-6.2%
2008*	\$ 919	3.0%
2000-2007 Growth Rate	4.6%	0.7%

* Lottery Commission projection

Source: Massachusetts State Lottery Commission

The legislation relating to Lottery mitigation uses the language: “total amounts deposited in the state lottery fund.” A number of studies have interpreted the language in different ways. The Massachusetts Taxpayers Foundation interprets it to mean “net profits before distribution.” All of the lottery revenues are deposited into the state lottery fund. Taken literally, that would mean that the legislation is referring to gross lottery revenues as opposed to the amount that is deposited into special funds to assist local governments.

We agree with the Taxpayers Foundation’s interpretation. Lottery officials define net profits to mean money left over after prize money and administrative expenses are paid. They say that is the most accurate way to gauge the Lottery’s performance. UHY Advisors, in its report for the Boston Chamber, used actual transfers to the General Fund made by the Legislature, which is sometimes more than the Lottery’s net profit.

To avoid confusion, we suggest that the language be clarified and that “net profit” be the measure used to calculate the Lottery mitigation.

A number of experts have weighed in on the impact of casinos on lottery revenues. Not all the numbers are projections. In some cases, they are simply assumptions or allowances for the sake of argument, that are used to determine the potential impact on the fiscal model.

The Lottery Commission itself expects a decline of 3 percent to 8 percent once the first casino opens. Within five years, the commission’s consultant sees revenue recovering to pre-casino levels, but that figure is not adjusted for inflation. And if an additional two casinos open, the negative impact on the Lottery would be much greater.⁶⁶

An August 2007 report by University of Massachusetts-Dartmouth Professor Clyde Barrow estimates a worst-case scenario of an 8 percent decline in the casinos’ first year.⁶⁷ A 2006 study by the House Committee on Economic Development estimates a potential decline of 15 percent through the casinos’ first two years.

The Massachusetts Taxpayers Foundation assumes a 5.5 percent decrease in 2012, when the first casino is expected to open, with a 1.5 percent growth rate resuming in 2013. The Foundation assumes a 1.5 percent growth rate from 2008 to 2011.

UHY Advisors allows, in its Greater Boston Chamber of Commerce report, for a decline of as much as 10 percent in 2012, nearly double that of the Foundation’s assumed allowance in its models.

It is important to note that under the administration proposal, the amount to be made up with casino revenues is not just the decline, should one occur, but the amount needed to ensure 3 percent growth as well. The lottery mitigation figure in 2012 could range anywhere from \$120 million to \$217 million, according to those surveys, which are summarized in the following table:

⁶⁶ 2003 Christiansen Capital Advisors report

⁶⁷ Maximum Bet: A Preliminary Blueprint for Casino Gaming & Economic Development in Massachusetts

Projected annual decline in net profit, \$ in millions (2012)	Lottery Commission best case: 3% decline *	Lottery Commission worst case: 8% decline*	Massachusetts Taxpayers Foundation 5.5% decline	University of Massachusetts – Dartmouth, worst case 8 percent decline	House Committee 7.5% decline	UHY Advisors, for Greater Boston Chamber, worst case scenario: 10 % decline
	\$120	\$150	\$144	\$169	\$164	\$217

State Treasurer Timothy P. Cahill, who supports the destination casino proposal and serves as chairperson of the Lottery Commission, notes that there would be an impact on the Lottery if casinos are built. But he noted in a September 18, 2007, op-ed in the *Boston Globe*⁶⁸ that the Lottery is already struggling to meet the growing revenue needs of cities and towns. If the revenues from casinos are combined with net lottery revenues and deliver the combined amounts to the state's 351 cities and towns, there will be a dramatically reduced need to rely on property taxes as the major generator of local revenue, according to Cahill.

There is also evidence to indicate that the casino proposal might not negatively impact the Massachusetts Lottery based on a review of what occurred in lottery states that became casino gaming states as well.

Although previous states that have legalized casinos can provide a guide, which might reflect what can be expected to happen to Massachusetts, there is no guarantee that one state lottery will be affected by casinos in the same magnitude as in another state.

We begin with a conceptual discussion of how casino introduction might affect the Massachusetts Lottery. Then we review some of the economics literature that has examined the relationship between casinos and lotteries. Finally, we present some data on lotteries from a variety of states and analyze what might be expected to happen in Massachusetts, relative to other states.

Theoretical discussion

Since casinos and lotteries both represent a form of gambling, one might reasonably expect that the two products would be substitutes for each other. If this is the case, then it is conceivable that any spending by Massachusetts residents at casinos might come at the expense of lottery sales. For example, in the extreme case, if each \$1 spent at casinos by Massachusetts residents means \$1 less on lottery sales, then we can be confident that the introduction of casinos would lead to a steep reduction in overall state lottery revenues. This is because the state retains between 44 and 50 cents from each \$1 of lottery sales, depending on the specific game,⁶⁹ whereas the proposed casino legislation includes a 27 percent tax on gross gaming revenue.

If we ignore administrative costs for the lottery and casinos and income taxes paid by casinos, then a dollar-for-dollar substitution of casinos spending for lottery spending would

⁶⁸ "Massachusetts' fortune is with gaming," Timothy P. Cahill, *Boston Globe*, September 18, 2007

⁶⁹ See Thomas Garrett (2001), "The Leviathan lottery? Testing the revenue maximization objective of State lotteries as evidence for Leviathan," *Public Choice* vol. 109, pp. 101-117.

reduce tax receipts from gambling. Clearly, such a scenario is unlikely to occur in reality. We can divide the Massachusetts population into gamblers and non-gamblers. If non-gamblers do not buy lottery tickets and would not go to casinos, then we can ignore them in the subsequent analysis. For the remaining Massachusetts population that gambles, the introduction of casinos will mean an additional option for gambling expenditures.

It is true that some people could substitute dollar-for-dollar casino spending for lottery spending. We view the size of this group as being relatively small, since the casino games and lotteries are different products.

We do not suggest that casinos would not necessarily impact other entertainment or gambling experiences. For example, casinos could have an impact on bingo. One anecdotal indicator of that has been the recent introduction of slots-only casinos in Pennsylvania. The Homewood Volunteer Fire Department in Beaver County, western Pennsylvania, once hosted bingo games that brought in players from as far away as Ohio and West Virginia. Such games funded 100 percent of the department's \$150,000 annual budget. In recent years, two casinos – Mountaineer Casino, Racetrack & Resort, 29 miles away in West Virginia, and the Meadows Racetrack & Casino, 55 miles away in Pennsylvania – opened. The number of nightly players has declined from as many as 500 to 100 or fewer. And bingo now covers only one-third of the department's budget.⁷⁰

The question is: Is bingo comparable to the lottery? In our experience, bingo is largely viewed as a social activity as much as it is a gambling experience. That gives it common characteristics with casinos, and points out a material difference between bingo and lotteries.

Lotteries are largely a convenience-driven product, with little social interaction. Casinos – particularly destination resorts – are centered on the entertainment experience. At the same time, studies have shown that the demographics of these two forms of gambling are markedly different. A 2006 survey of 2,250 adults across the nation – including 1,473 who had gambled within the previous year – illustrates the demographic differences among participants in different forms of gambling:

⁷⁰ "Study says casinos cut into bingo profits," *Pittsburgh Tribune-Review*, May 13, 2008

Profile of Gamblers in the United States

	Any type of gambling	Bought lottery ticket	Visited casino	Bet on sports**	Played cards for money
All adults	67%	52%	29%	23%	17%
Gender					
Men	72%	56%	31%	32%	25%
Women	62%	48%	27%	15%	10%
Race/Ethnicity					
White	68%	53%	30%	23%	18%
Black	62%	45%	24%	24%	14%
Hispanic*	62%	47%	22%	16%	12%
Age					
18-29	71%	48%	30%	30%	32%
30-49	69%	56%	30%	25%	17%
50-64	68%	55%	31%	22%	11%
65+	58%	43%	22%	13%	10%
Education					
College graduates	65%	48%	31%	25%	15%
Some college	71%	55%	32%	23%	21%
H.S. grad or less	66%	52%	27%	22%	17%
Family income					
\$100,000+	79%	57%	40%	39%	24%
\$50K-\$99k	74%	60%	37%	27%	22%
\$30K-\$49k	67%	54%	27%	22%	21%
Less than \$30k	59%	44%	21%	16%	11%
Region					
Northeast	77%	63%	31%	26%	20%
Midwest	64%	52%	26%	23%	18%
South	62%	48%	24%	21%	15%
West	68%	47%	38%	23%	17%
Religion					
Protestant	61%	48%	24%	19%	13%
Catholic	77%	62%	39%	30%	23%
Secular	72%	52%	29%	24%	23%
White Protestants					
Evangelical	50%	40%	19%	14%	11%
Mainline	73%	58%	29%	24%	17%

*Hispanics are of any race

** Betting on sports includes professional sports, college sports or an office pool

Source: Pew Research Center

The introduction of a new good to the state's entertainment offerings – such as casinos – will likely cause a modest increase in expenditures. If consumers are offered a new product that is in demand, they may divert spending from other items, or may use savings to purchase the new good or service. Hence, the introduction of casinos might have a positive stimulus effect on overall demand for goods and services in the state. This effect would tend to be positive for the state, as overall expenditures increase. This is essentially an increase in economic activity, which represents a source of economic growth and higher incomes. This is a well-known principle in economics which was famously expounded by Austrian economist Joseph Schumpeter.⁷¹

Another possible effect of introducing casinos in Massachusetts is to stimulate the purchase of lottery tickets from out-of-state visitors. Given that the lottery is widespread in the United States, this is unlikely to be a large source of lottery sales. But it is conceivable that, if the lottery is marketed within casinos, out-of-state visitors can be expected to spend money at the casinos and may purchase lottery tickets as well. We view this effect on the lottery as being quite small.

As discussed above, there could be several conflicting effects to a state's lottery when casinos are introduced. Although each state has unique features that may not be replicated in other states, we can obtain important information by looking to the experiences and data from other states. There have been numerous economic studies of lotteries. A small body of literature has examined how different types of gambling affect each other. We review this literature, and then focus on the relationship between lotteries and casinos.

We review two types of studies. The first type includes papers that primarily analyze the relationships among gambling industries, whether or not state tax revenue is explicitly considered. The second type includes papers that focus specifically on the relationship between gambling industries and tax revenues. One important caveat is that most of these studies do not provide information on the overall effect of *all types* of legalized gambling on other industries or on state tax revenues. In particular, most of the published studies:

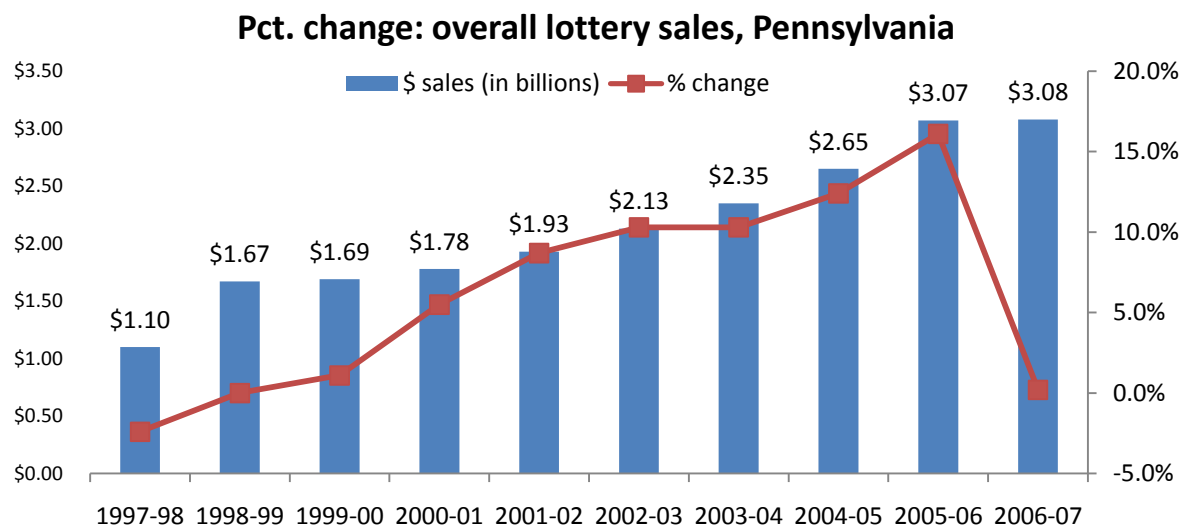
- Concern the impact of a single industry on one other industry, and not vice versa;
- Concern the impact of a single industry on state tax revenue;
- Are for relatively short time periods; or
- Concern a single state or a small number of states.

In short, the problem with the existing literature is that the results are applicable to specific jurisdictions, during specific time periods, and for specific industry relationships. Few studies have examined the more general relationships among gambling industries and the effects of these industries on overall state tax revenues. Thus, the results reported in previous studies may not be directly applicable to Massachusetts.

The most recent example of data as to how casinos can impact the lottery comes from Pennsylvania, where six casinos have been introduced at various geographical locations at various times over the past two years, with six more coming (as well as two 500-slot casinos at resort hotels that will be used for hotel guests only). A recent study of the impact of slots gaming

⁷¹ Joseph Schumpeter (1934 [1983]), *The Theory of Economic Development*, chapter 2. New Brunswick, NJ: Transaction Publishers.

on Pennsylvania lottery sales may provide some insight into what has occurred in Pennsylvania. The study, released June 11, 2008, by the Legislative Budget and Finance Committee, was required by Pennsylvania state law.⁷²



Source: Pennsylvania Legislative Budget and Finance Committee

Between 2001 and 2006, the Pennsylvania Lottery experienced a period of unprecedented 73 percent sales growth. The growth spurt included four consecutive years of double-digit increases, capped by a 16 percent rise in fiscal 2005-2006.⁷³ According to the report, the significant growth rate in recent years can largely be attributed to a significant increase in the vendor network.

By concentrating on recruitment and focusing on corporate accounts, the Lottery reversed a 16-year decline in retailer counts, from 1986 to 2002. The number of retailers increased by 20 percent from January 2003 through June 2006. Nearly 1,500 new retailers were added to the lottery retailer network during that period, bringing the total to more than 8,400.

In fiscal 2007, another 129 retailers were added, which is about a third of the figure for three previous years.⁷⁴ The increase in lottery sales fell to just 0.2 percent in fiscal 2007. The state's first slots parlor opened in November 2006. Lottery officials acknowledge that the slots parlors probably had some impact on sales but claim it is difficult to estimate how much of an impact it had.

“The slots wagering of nearly \$14 billion between November 2006 and January 2008 would appear to have some impact on the availability of personal discretionary income for lottery purchases. But, the extent to which slots wagering may shift individuals’ gaming attention

⁷² Act 2004-71

⁷³ Pennsylvania Lottery Commission

⁷⁴ Pennsylvania Department of Revenue

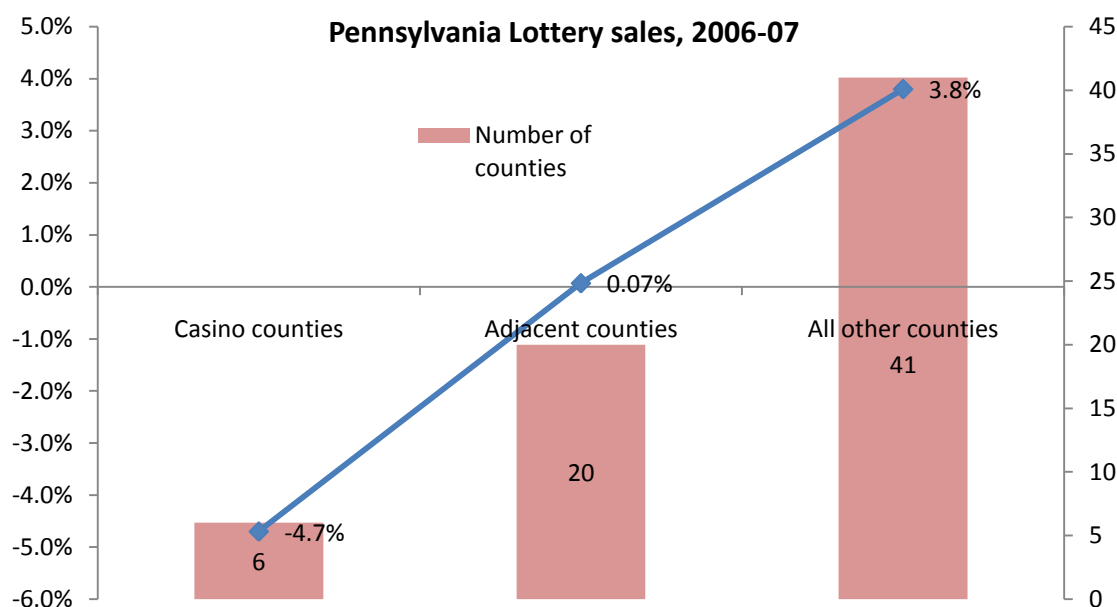
and resources away from lottery games is difficult, if not impossible, to quantify,” according to the study.⁷⁵

In releasing the lottery report, Revenue Secretary Thomas Wolf, who oversees the lottery, noted results are affected by a “myriad of factors such as jackpot sizes, marketing efforts, the economy and even the weather. We cannot attribute any single factor as the sole reason for an increase or decrease in lottery sales.”⁷⁶

The study noted that the single biggest negative effect on sales may have been the relatively small Powerball jackpots in 2007.⁷⁷ On the other hand, Mega Millions jackpots in states that border Pennsylvania were high. The result was that lottery players bought Mega Millions tickets rather than Powerball tickets.⁷⁸

The report appears to show, however, that there is an impact on sales in counties with casinos and on counties adjacent to where casinos are located.⁷⁹

The study analyzed lottery sales in each of Pennsylvania’s 67 counties, comparing data from 2007, when slot parlors were open, with that of 2006. It found that sales in the six casino home counties declined by 4.2 percent. Sales were just about flat in the 20 counties adjacent to casinos and increased by 3.8 percent in the 41 non-adjacent counties.⁸⁰



Source: Pennsylvania Legislative Budget and Finance Committee

⁷⁵ An Assessment of the impact of slots gaming on Pennsylvania Lottery Sales, June 11, 2008.

⁷⁶ Pittsburgh Post-Gazette, June 12, 2008

⁷⁷ Ibid

⁷⁸ Ibid

⁷⁹ Ibid

⁸⁰ Ibid

But the spread between casino counties and non-casino ones would have been even greater had the study looked at just the months that facilities were open in 2007. One of them opened in June; another in November. Yet the study considered sales for the entire calendar year.

After disregarding the data for the months that the facilities were not open, the six casino home counties actually registered a sales decline of nearly 5 percent in 2007, not the 4.2 percent quoted in the report.

More telling is that only 19 of the 67 counties in the state registered sales declines. Fourteen of them were in counties where a slots facility is located or in counties that bordered them. Of the 41 non-slots counties that were not adjacent to casinos, only five had lower annual sales in 2007 than in 2006.⁸¹

Luzerne County, where Mohegan Sun at Pocono Downs is located, sustained a sales decline of 7.7 percent, the second largest decline of any of the state's 67 counties.

In the most recent fiscal year, which ended June 30, Pennsylvania reported additional growth in lottery sales of \$12.8 million, including a \$3.3 million increase in sales of instant games. Sec. Wolf told the media: "In these tough economic times, the Pennsylvania Lottery had an extraordinary year."⁸²

Of concern to the lottery in Massachusetts would have to be its successful Keno game, which accounts for between 15 and 20 percent of sales. The game is more of a social one and would be more likely to be impacted by casino gaming.

In New York State, lottery sales involving Keno dropped precipitously in Niagara County after the Seneca Niagara Casino Hotel opened on December 30, 2002.⁸³ Lottery officials provided us with fiscal year data for 2002 and compared it with fiscal 2004, the 12-month period after the casino opened. The lottery's Quick Draw keno-type game fell 21 percent. In the rest of the state, sales increased by 2 percent.

The negative trend for Quick Draw has continued over the years. In fiscal 2008, Keno sales dropped 36 percent compared to the year before the Seneca casino opened. The statewide figure was a 9 percent decline.

The New York Lottery reported significant growth in fiscal 2008 of 4 percent, and cited two factors: the success of video lottery terminals, particularly at Yonkers Raceway, outside New York City, and the increased popularity of certain instant games, which collectively account for half of the New York Lottery's revenue. In the first quarter of the current fiscal year, Mega Millions lottery ticket sales grew by 40 percent in the quarter, while sales for \$10 and \$20 instant games grew by 26 percent⁸⁴.

⁸¹ Ibid

⁸² "Economy, Casinos not Hurting Pa. Lottery Sales," *Pittsburgh Post-Gazette*, July 21, 2008

⁸³ New York State Lottery, interview June 16, 2008

⁸⁴ "New York Lottery Revenue Increases," *Binghamton Press & Sun-Bulletin*, July 12, 2008

Clearly, the Pennsylvania and New York state experience would indicate that lottery sales near three destination casinos in Massachusetts would decline, at least in the short term. We have to look at other examples to gain some insight into long-term trends.

The papers discussed below are relevant for two specific parts of this report: the anticipated short-term and long-term impact on the Massachusetts lottery, and the potential impact and anticipated substitution effect on existing Massachusetts businesses, such as dining and retail.

Elliot and Navin⁸⁵ model the determinants of lottery sales in 48 states, from 1989-95. In analyzing how other gambling industries affect lottery sales, they use the number of Indian casinos in the state and the highest gross revenues per capita for a lottery and gaming in any neighboring state. They find that casinos and pari-mutuels harm the lottery, and that adjacent state lotteries have a small negative effect on in-state lottery sales. The number of Indian casinos in a state and riverboat casinos in neighboring states do not significantly affect lottery sales.

Fink and Rork⁸⁶ argue that low-revenue lottery states are more likely to legalize casinos. This partly explains the negative relationship between casinos and lotteries.

Kearney⁸⁷ examined household expenditure data from 1982-98, a period during which 21 states implemented a state lottery. Among other issues, she studied the source of lottery ticket expenditures. Kearney finds that spending on lottery tickets is financed completely by a reduction in non-gambling expenditures. This implies that other forms of gambling are not harmed by a lottery, but that non-gambling industries are. Even so, we could reasonably expect that the lottery would therefore increase overall state tax revenues since the lottery tax is significantly higher than taxes on most other types of expenditure.

Siegel and Anders⁸⁸ tested the effect of Arizona Indian casinos on the state's lottery sales from 1993-98. Explanatory variables included the number of Indian casino slot machines and horse and greyhound racing handle. They found the number of Indian slot machines to have a significantly negative effect on lottery sales.

Several studies have focused more specifically on the tax revenue question. Anders et al.⁸⁹ examine the effect of Indian casinos on transactions tax revenue of one Arizona county. Since Indian casino revenues in many states are not directly taxed by the state, officials may be concerned that increases in casino expenditures will result in less spending on taxable goods and services. (Different states may negotiate different terms in developing agreements to allow Indian casinos.) In their model estimating state tax revenues from 1990-96, the authors consider the introduction of casinos. They find that the decline in the Transaction Privilege tax from the

⁸⁵ Donald S. Elliott and John C. Navin (2002), "Has Riverboat Gambling Reduced State Lottery Revenue?" *Public Finance Review*, vol. 30, pp. 235-247.

⁸⁶ Stephen Fink and Jonathan Rork (2003), "The importance of self-selection in casino cannibalization of state lotteries." *Economics Bulletin*, vol. 8, pp. 1-8.

⁸⁷ Melissa Kearney (2005), "State lotteries and consumer behavior," *Journal of Public Economics* vol. 89, pp. 2269-2299.

⁸⁸ Donald Siegel and Gary Anders (2001), "The impact of Indian casinos on state lotteries: A case study of Arizona. *Public Finance Review*, vol. 29, pp. 139-147.

⁸⁹ Gary Anders, Donald Siegel, and Munther Yacoub (1998), "Does Indian casino gambling reduce state revenues? Evidence from Arizona. *Contemporary Economic Policy*, vol. 16, pp. 347-355.

retail, bar, hotel, and amusement sectors, associated with the opening of casinos was about 0.44 percent. These results suggest that there was, at least in this case, a small substitution effect away from other goods and services toward the casinos.

Popp and Stehwien⁹⁰ can be seen as a complement to the study by Anders et al. (1998), but applied to New Mexico county-level tax revenue, from 1990-97. They find that Indian casinos have a negative effect on tax revenues within the county.

Borg et al.⁹¹ (1993) found that \$1 in net lottery revenue has a cost of 15 cents to 23 cents in other types of government revenue, particularly sales and excise taxes, but that the lottery leads to an overall increase in revenues. Fink et al.⁹² also study the overall tax revenue effects of lotteries. Their results are partially consistent with those of Borg et al. (1993). However, Fink et al. (2004) find that overall state tax revenue decreases when lottery revenues increase. Both of these papers consider lotteries, but do not account for other types of gambling in their models.

Siegel and Anders⁹³ examine Missouri sales tax revenues at the county level (1994-96) as a result of introducing riverboat casinos. Like Anders et al. (1998), they find taxes from certain amusement industries are negatively impacted. Siegel and Anders estimated that a 10 percent increase in gambling tax revenue leads to a 4 percent decline in tax revenues from other amusement and recreation sources. However, there is no clear and consistent negative effect on other types of tax revenues.

We suggest that the likelihood of advancing public policy through the establishment of legal casinos can be best advanced in Massachusetts by requiring that all successful bidders for licenses put forth comprehensive plans that are designed to optimize a number of factors, including:

- Out-of-state visitation
- Employment
- Capital investment
- Collaborative marketing with other segments of the leisure and hospitality industries.

This latter point should be underscored with respect to the Massachusetts Lottery. In our experience, lotteries and casinos in other states have developed cross-marketing plans of varying success. The New Jersey Lottery, as one example, developed instant games in which players could win prizes at Las Vegas casinos. In one game, 3.3 million \$5 scratch-off tickets were printed in 2004 in which 300 tickets included four-day, three-night packages at Caesars Palace in Las Vegas, including round-trip coach airfare and \$500 in spending money.⁹⁴

⁹⁰ Anthony Popp and Charles Stehwien (2002), "Indian casino gambling and state revenue: Some further evidence. *Public Finance Review*, vol. 30, pp. 320-330.

⁹¹ Mary Borg, Paul Mason, and Stephen Shapiro (1993), "The cross effect of lottery taxes on alternative tax revenue. *Public Finance Quarterly* vol. 21, pp. 123-140.

⁹² Stephen Fink, Alan Marco, and Jonathan Rork (2004), "Lotto nothing? The budgetary impact of state lotteries," *Applied Economics*, vol. 36, pp. 2357-2367.

⁹³ Donald Siegel and Gary Anders (1999), "Public policy and the displacement effects of casinos: A case study of riverboat gambling in Missouri." *Journal of Gambling Studies*, vol. 15, pp. 105-121.

⁹⁴ <http://liberty.state.nj.us/lottery/instant/ig431.htm>

All bids for any future casino destinations in Massachusetts should include plans designed to minimize any negative impact on the lottery, while increasing ticket sales to out-of-state residents.

The Commonwealth should follow Pennsylvania's lead. The Legislature in that state mandated that lottery terminals be installed in prominent areas of the casino floor. The 11 terminals at the six casinos generated more than \$1.3 million in sales from July 10, 2007, through February 27, 2008.

Historical lottery and casino data

Few of the studies above focus specifically on the relationship between commercial casinos and lotteries. In addition, those studies often used varying methodologies, time periods and jurisdictions, which may explain the inconsistencies often seen in their results. In this section we provide more basic data on the relationships between lotteries and casinos.

Commercial casinos began to spread in the United States (outside Nevada and New Jersey) in the late 1980s. In order to see the effect casino gambling has had on state lotteries, it is informative to look at rates of change for lottery revenues. Below we present two tables.

The first table shows that lottery growth rates in non-casino states have varied drastically. However, the average growth rate in lotteries is significantly lower during the 2000-2005 period than in the previous period. This overall decline in lottery growth rates is perhaps due to a "saturation" effect. Still, lotteries are seeing positive growth rates even adjusted for inflation. As lotteries have been adopted in most states, perhaps now there is relatively little cross-border purchasing which may have stimulated earlier, more isolated state lotteries. During both pre-2000 and post-2000 time periods, the growth rates in lottery revenues outpaced the growth rate in the population. This suggests that the lottery is still a popular and growing government product.

Average annual lottery and population growth rates, selected non-casino states

State	(a) 1 st year of data	(b) Lottery growth, 1 st yr.-2000	(c) Population growth, 1990- 2000 ^b	(d) Lottery growth, 2000-2005 ^a	(e) Population growth, 2000-2005 ^b
Georgia	1993	10.3%	2.6%	3.2%	2.2%
Kentucky	1989	11.0%	0.9%	2.2%	0.6%
Maine	1985	16.3%	0.4%	6.3%	0.6%
Maryland	1985	-0.4%	1.1%	3.1%	1.0%
Massachusetts	1985	6.2%	0.6%	1.3%	0.2%
Nebraska	1995	-5.2%	0.8%	7.7%	0.5%
New Hampshire	1985	17.7%	1.1%	3.8%	1.1%
Ohio	1985	3.4%	0.5%	-2.0%	0.2%
Pennsylvania	1985	-1.3%	0.3%	9.7%	0.2%
Texas	1993	4.4%	2.3%	4.4%	1.9%
Vermont	1985	13.1%	0.8%	4.1%	0.4%
Virginia	1990	6.1%	1.4%	4.2%	1.3%
Averages		6.8%	1.1%	4.0%	0.9%

Notes: All averages calculated by Walker using data from Walker and Jackson (2008) and the U.S. Census Bureau.

^a Average growth rates in lottery sales between 2000 and 2005 are calculated assuming a constant compound rate of change between 2000 and 2006 revenues. Delaware, Rhode Island, and West Virginia are omitted because their 2006 data include revenues from video lottery terminals.

^b These rates are calculated by dividing the 10-year and 5-year growth rates, 1990-2000 and 2000-2005, by 10 and 5, respectively. This method ignores compounding, but the difference is modest.

The next table shows the growth rates in population and lottery revenues overall and decomposed into pre- and post-casino introduction periods. (Rates in both tables below use inflation-adjusted data.) Note that the earliest year for which data are presented in both tables is 1985. This is because we are trying to focus on how lotteries were affected by the spread of casinos that occurred mostly during the 1990s. The same time period is chosen for the non-casino states to serve as a comparison to the casino states.

Average annual lottery and population growth rates, selected casino states, 1985-2005.

State	(a) 1 st year of data	(b) Lottery growth, 1 st yr.- 2000	(c) Population growth, 1990-2000	(f) Year Casinos Opened	(g) Lottery growth before casinos	(h) Lottery growth after casinos opened (through 2000)	(d) Lottery growth, 2000- 2005	(e) Population growth, 2000-2005
Colorado	1985	7.2%	3.1%	1992***	9.5%	5.7%	2.0%	1.6%
Connecticut	1985	3.1%	0.3%	1992*	3.1%	3.1%	0.3%	0.5%
Illinois	1985	-1.6%	0.8%	1991**	1.0%	-2.8%	3.2%	0.5%
Indiana	1990	1.2%	1.0%	1995**	8.7%	1.3%	4.2%	0.6%
Iowa	1986	3.2%	0.5%	1992***	8.7%	-1.3%	10.8%	0.3%
Louisiana	1992	-5.1%	0.6%	1988***			1.0%	0.2%
Minnesota	1990	-0.1%	1.2%	pre-1985*			-0.2%	0.8%
Missouri	1986	6.0%	0.9%	1994**	3.6%	8.1%	9.5%	0.7%
New Jersey	1985	1.6%	0.9%	pre-1985**			2.7%	0.6%
New York	1985	4.3%	0.5%	pre-1985*			9.4%	0.3%
Averages		2.2%	1.0%		5.8%	1.2%	4.3%	0.6%

Notes: * Indian casinos only, as of 2000; ** Commercial casinos only, as of 2000; *** Commercial and Indian casinos

Comparing columns (d) and (e) from the table above, we see that on average, adjusted for population, the lottery growth rates in casino states *exceeds* those in non-casino states. As cautioned earlier, any particular state may see results substantially different from the average experiences of other states. This may suggest that, after an initial negative casino effect on the lottery, the lottery recovers and sees even higher growth rates than before casinos.⁹⁵

Indeed, while we caution that experience in other states is limited because so many factors can differ, the experience in Connecticut – a state that introduced two destination casinos in the 1990s – shows that the destination business model can successfully co-exist with a lottery.

From 1992 through 1996, Connecticut Lottery sales grew by 30 percent, from \$544 million in fiscal 1992 to \$707 million in fiscal 1996.⁹⁶ Foxwoods in Connecticut opened in 1992, and had been expanding throughout that period of study. Mohegan Sun opened in October 1996, and thus overlapped that study by less than a year. Still, the data indicate that casino destinations did not hurt lottery sales, despite the opening of the two of the world's most successful gaming

⁹⁵ In his paper, Jeff Dense argues that there “continues to be minimal substitution between state lotteries and commercial casinos.” His analysis shows that state government receipts from lotteries and casinos are both positive over time. However, it is unclear whether or not he adjusted his data for inflation. See Jeff Dense, “State lotteries, commercial casinos, and public finance: An uneasy relationship revisited.” *Gaming Law Review*, vol. 11, pp. 34-50.

⁹⁶ “A Study Concerning the Effects of Legalized Gambling on the Citizens of the State of Connecticut,” The WEFA Group, 1997

properties. The WEFA Group, in its study, attributed that growth, in large measure, to the introduction of instant games priced at \$2 or more.

The Massachusetts Lottery has been one of the highest revenue-generating lotteries in the country, even though its growth rate has been modest. Note that even in the recent 2000-05 period, growth in lottery receipts has outpaced population growth. So even though the growth rate in Massachusetts lottery receipts has slowed over the past decade, it is still seeing strong performance.

One question that needs to be addressed in any analysis of the potential impact of casinos on the Massachusetts Lottery is: Why is the lottery so successful? The Massachusetts Lottery has indeed achieved astounding success, compared to its peer group, as shown in the following table, which lists fiscal year 2006 data:

	Population (millions)	Lottery sales (millions)	Sales per capita
Massachusetts	6.44	\$ 4,501.24	\$ 698.95
New York	19.31	\$ 6,487.14	\$ 335.95
Georgia	9.36	\$ 2,955.38	\$ 315.75
New Jersey	8.72	\$ 2,406.50	\$ 275.97
Pennsylvania	12.44	\$ 3,070.27	\$ 246.81
Michigan	10.10	\$ 2,212.37	\$ 219.05
Florida	18.09	\$ 3,929.03	\$ 217.19
Ohio	11.48	\$ 2,220.93	\$ 193.46
Texas	23.51	\$ 3,774.69	\$ 160.56
California	36.46	\$ 3,585.00	\$ 98.33

Source: LaFleur's 2007 World Lottery Almanac

Such a dramatically different penetration rate among lottery sales cannot be attributed to any particularly unusual demographic characteristics regarding the adult population of Massachusetts. It cannot be attributed to the absence of casinos in the region, since nearby states have casinos – and we note that Massachusetts dramatically outperforms states such as Georgia, Texas and Ohio that do not have casinos.

Massachusetts has continued to grow its successful lottery, and recently reported a \$237 million increase in sales last year for a record \$4.7 billion⁹⁷.

We believe that the success of the Massachusetts Lottery can largely be attributed to innovative, creative leadership. This has long been the case, since Massachusetts was the first state to introduce instant games, in 1974. The lottery still introduces 24 to 28 new instant games annually, and such games account for 69 percent of overall lottery sales.⁹⁸

Indeed, lottery officials introduced a new Billion Dollar Blockbuster game that passed \$600 million in sales as of the end of May, placing the game on track to reach its goal of \$1.3

⁹⁷ "In Recession, Lottery Players Dream Big," *Boston Herald*, July 18, 2008

⁹⁸ Massachusetts State Lottery Information Packet, 1971-2006

billion in sales in a year.⁹⁹ Lottery officials say the Blockbuster sales have played a major role in growing revenue.

And in early June, the lottery announced it was adding a second daily drawing, a move that is expected to generate additional yearly sales of \$27 million. The lottery has also added a \$20 scratch-off ticket and made a number of changes to its Keno game, including a mobile version.¹⁰⁰

Clearly, a talent for innovative marketing – coupled with a strong network of about 7,500 agents – would not be adversely affected by the introduction of casinos. Since the lottery has already demonstrated willingness and an ability to identify cross-marketing opportunities with sports teams and others, it would likely be a willing partner in any such opportunity to join forces with casinos in a potentially effective campaign as well.

We note two conflicting pieces of evidence. Walker and Jackson (2008a, b) provide evidence from nationwide studies that suggest that casinos will have a negative impact on the lottery and on state tax receipts. On the other hand, anecdotal evidence from growth rates of state lotteries show that states that have introduced casinos see a decline in lottery growth, but typically those states still see positive growth of lottery receipts.

These apparently conflicting results can be reconciled by considering that the econometric modeling employed by Walker and Jackson accounts for other factors that affect the gambling industries and overall tax receipts.

In view of this evidence, we believe that the introduction of commercial and Indian casinos would have a short-term negative effect on the Massachusetts State Lottery. Since, as the Pennsylvania experience shows, the precise impact will depend on the location of destination casinos, we cannot quantify that impact at this early stage. This result will be very sensitive to the extent to which the conditions of the Patrick Administration's plan are implemented so that the lottery is promoted within the casinos, and by casinos. If these efforts are successful, it is possible that the Massachusetts Lottery could quickly see an increase in the rate of growth. Missouri provides another example of this situation, where the lottery growth rate increased significantly *after* the introduction of casinos.

Additionally, if casino operators develop and follow through on cross-marketing strategies designed to boost lottery sales, there will be increased potential of actual growth in lottery sales as a result of the introduction of casinos in Massachusetts.

With that in mind, we suggest the following: For the first three years following the opening of each destination casino, the revenue required to ensure that the lottery's ability to distribute funds should be the responsibility of the casino operators, rather than requiring that it be funded from the Commonwealth's share of gross gaming revenue, as presently proposed.

The Massachusetts Taxpayers Foundation assumes that lottery net profits before distribution (the amount returned to the Commonwealth) would be about \$1.07 billion in 2012,

⁹⁹ "Blockbuster lottery ticket \$600 million Lottery Hit," Boston Herald, May 26, 2008, http://www.bostonherald.com/business/general/view/2008_05_26_Blockbuster_lottery_ticket__600_million_Lottery_hit:_Game_breaks_records

¹⁰⁰ "Lottery adds 2nd drawing," Boston Globe, June 7, 2008, http://www.boston.com/business/articles/2008/06/07/lottery_adds_2d_drawing/

the base year. Thus, each 1 percent annual increment would be \$10.7 million. If we accept the foundation's analysis, which assumes a 5.5 percent decline in lottery revenue followed by a 1.5 percent growth rate in 2013, the annual amount needed to ensure that the Lottery maintains its 3 percent growth rate is not adversely affected, as per the proposed legislation, would be \$144 million, under the legislation as constituted.

While this could add materially to the casinos' effective tax burden in the early years of operation, the impact would decline in subsequent years as the lottery resumes its growth. Additionally, such a scenario would be a further incentive to casino operators to develop effective strategic alliances and cross-marketing opportunities with the lottery. Such a move would in effect make the casinos a partner with the lottery. This would also help ensure that casinos are fully integrated into the overall tourism economy, since a focus on tourists would be least likely to cause any disruption to lottery revenue. Essentially, by requiring that casino operators shoulder the burden of ensuring that the lottery is not adversely affected, it would help ensure goal congruence by the casinos, the lottery and the entire Commonwealth of Massachusetts.

Spectrum also suggests that at least one of the two gubernatorial appointees to the Massachusetts State Lottery Commission be a representative of the casino industry as a step that could help ensure coordination among all efforts to grow lottery revenues.

We also suggest that the proposed 3 percent guaranteed long-term growth rate be reconsidered, as it is perhaps too ambitious for a lottery that has proven to be so successful. Indeed, the lottery's success will make it increasingly difficult to achieve such growth over time, requiring higher per capita spending from adults who are already spending more on lottery tickets than their counterparts in other states.

When it comes to protecting the highly important Massachusetts Lottery as a reliable source of revenue, the Legislature essentially faces at least two choices: Protect the lottery by using the state's share of casino revenue to ensure its continued success, or require the casinos themselves to protect that source for at least the first three years.

The first choice, as outlined in the legislation, is potentially unpalatable – as the Massachusetts Taxpayers Foundation noted – because it would materially siphon off funds that would have been targeted for other uses, such as transportation funding. The legislation, as presently constituted, guarantees the Lottery's success by shifting public resources from one source to another. Moreover, it guarantees a 3 percent growth rate, regardless of economic conditions, which the free market itself could never guarantee.

The second option is potentially unpalatable as well, because it could reduce the potential investment by casino operators. Clearly, any material demand on casinos to subsidize the Lottery's growth would dampen potential returns on investment, and could adversely reduce the amount of invested capital, as well as overall employment. Additionally, casino operators would likely object to any long-term subsidy as being unfair. In essence, an industry that has put forth a more competitive, attractive option would have to subsidize an option that has proven less attractive to consumers by contrast.

The competitive bidding process could offer a means of making that second option more acceptable to potential casino operators: Allow them to develop plans to assist the lottery for at least three years. These plans could range from financial subsidies to marketing assistance to

some combination of the two, or through creative means that we cannot anticipate in this analysis.

Any projection of the impact of casinos on the lottery requires information that is not presently available, including the location of potential casinos, as well as information regarding marketing plans designed to improve lottery sales. The Lottery Commission's range of a 3-8 percent decline is sufficiently conservative and reasonable, and the credible studies we have reviewed assume a recurrence of growth over time. We also accept the wisdom in this quote from UHY Advisors: "All else equal, if income rises over time, consumers will have more resources to spend on all forms of consumption, including casino gaming and lottery play¹⁰¹."

Indeed, the continued success of the Massachusetts Lottery depends in large measure on continued economic health, which legalized casinos would be expected to enhance. Since the Commonwealth would have significant leverage at the outset of the competitive bidding process, it would be prudent and reasonable to expect competitors for casino licenses to put forth plans of at least three years' duration that can realistically protect the lottery.

Casino applicants are expected to compete on the basis of which bidder puts forth an overall plan designed to advance public policy in Massachusetts. Protecting the lottery should be an important part of that.

New Jersey case study

In May 2000,¹⁰² the New Jersey Lottery reported that its top 1,200 agents – the top 20 percent of its network – generated \$18.7 million in average weekly sales during a 13-week period. Annualized, that means that the top 1,200 agents generated about half of all lottery sales that year.

Atlantic County – which hosts the casino industry in New Jersey – was home to 29 of the top agents, and those agents combined sold an average \$450,436 in weekly tickets. This amounted to 2.4 percent of the total generated by all 1,200 top agents.

Atlantic County was home to about 3 percent of New Jersey's population in 2000. That discrepancy – 3 percent vs. 2.4 percent – might indicate that per capita lottery sales were relatively weak in Atlantic County. That does not tell the entire story, however.

The Atlantic County economy had clearly been growing significantly during that period, and its population growth was twice the state's average.¹⁰³ Still, Atlantic County, which has long been dependent on agriculture and seasonal tourism, had a lower per capita income – \$44,782 – than New Jersey overall – \$57,338, and lagged in other economic indicators as well. Since lottery sales are dependent on a healthy economy and relative levels of disposable income, this disparity would have accounted for the difference in lottery sales.

¹⁰¹ "Casino Gaming in Massachusetts: An Economic, Fiscal & Social Analysis," UHY Advisors, p. 115.

¹⁰² "Top 1,200 Agents," New Jersey Lottery. May 11, 2000. This data was considered public at the time. The New Jersey Lottery has subsequently determined that sales by individual lottery agents is confidential and has not publicly released data since that time.

¹⁰³ U.S. Census Bureau

What is particularly interesting about the 2000 data is that four of the top five lottery agents in Atlantic County, as well as five of the top seven, were casinos. At the time, Atlantic City hosted 12 casino hotels. Trump Taj Mahal averaged \$30,379 in weekly sales during that period.

Of the 1,200 top-performing lottery agents, the average weekly sales per agent at the time was \$15,613. Five casinos exceeded that average.

Atlantic City casinos have never been required to sell lottery tickets, and most limit sales to non-prominent locations, such as gift shops. The ability to become top sellers, however, is clearly a function of the level of traffic generated by casinos. Casinos in Atlantic City generate about 34 million visitor trips per year,¹⁰⁴ which is about four times the entire population of New Jersey. If casinos in Atlantic City were required to become aggressive marketers of lottery tickets, clearly the sales would increase significantly higher. This case study supports the notion that a pro-active approach by the Massachusetts Lottery and any future casinos could effectively leverage the opportunities afforded by that additional traffic.

Anticipated substitution effect on Massachusetts businesses

Legalized casinos can have a variety of impacts on the local economy within various regions of Massachusetts. These effects are not limited to tax receipts or the potential cannibalization of lottery revenues. Casinos can be thought of as a new industry entering a state that will represent a significant source of competition for the consumers' discretionary spending. Existing industries and firms are justifiably concerned that the introduction of casinos could spell increased competition for them. But is this aspect of casinos an argument against their legalization? In this section we discuss the theoretical "substitution effects" of new casinos in a state. We also consider some general characteristics of increased competition and the effects on product variety, prices, and labor markets. Then we review some of the basic economic arguments on the potential benefits from legalizing casinos. This discussion is then framed in the context of the employment and expenditure effects estimated elsewhere in this report, in the academic literature, and in light of the Patrick Administration's casino proposal.

As casino gambling has expanded throughout the nation in recent decades, numerous studies have been published examining the potential economic effects of casinos, but few studies have been backward-looking to analyze exactly what has happened. In the case of the proposed Massachusetts legislation, voters and politicians are understandably concerned about the potential effects of legalizing commercial casinos, or approving an Indian casino, in Massachusetts.

A variety of authors, advocates, and media reports has expressed concern that expansion in the casino industry is likely to lead to decline in other industries, with a net result of little overall economic stimulus, or worse, a negative impact. There is a grain of truth in this argument; it is a possibility that deserves consideration. However, the actual economic effects of casinos are not as simple as is commonly suggested. There are three basic varieties of the "substitution effect" argument relative to casinos:

¹⁰⁴ South Jersey Transportation Authority, *Gaming Industry Observer*

- “Industry cannibalization”
- Export base theory of growth
- Money inflow (mercantilism)

The three arguments are closely related; each is discussed below.

One of the most common concerns about legalized casinos is that any additional economic activity resulting from casinos comes at the expense of activity in other industries. According to this argument, the introduction of casinos simply shuffles spending among industries, so any positive employment or state income effects from gambling are offset by losses in existing industries, which see lower sales volume and decreased employment. This idea is typically referred to as “industry cannibalization.” This argument is quite common among gambling opponents and is often heard in debates over casino gambling. The argument is similar to that with lotteries, as described earlier. However, theoretically, this effect is no different than standard market competition that occurs when *any* new business opens in a market. It promotes economic efficiency, more variety, and lower prices – all beneficial to consumers. Moreover, there has been very little empirical evidence presented on the issue – either for or against casinos. Some of the studies previously reviewed present some case studies, but little general empirical evidence exists on the relationships between casinos and non-gambling industries.

Legalized casinos may replace some other businesses, or at least lead to a reduction in revenue in some industries. At the same time, however, there may be industries that thrive with the introduction of casinos. For example, casinos in Massachusetts may attract new tourists, or residents may increase their spending on nights out. From a social welfare perspective, the significant issue is not whether some firms are harmed or helped by legalizing casinos, but whether the introduction of a new industry increases societal welfare; this should be the goal of politicians and public policy in Massachusetts.

(The key issue that differentiates casino from other typical firms is that casino gambling availability may contribute to problem gambling behaviors, which may be considered to be social costs, and need to be considered prior to authorizing casinos. Importantly, the Patrick Administration’s proposal provides for funding to help provide prevention and treatment resources for problem gamblers. However, gambling problems may exist even if Massachusetts does not introduce casinos, simply because so many residents already play the lottery or travel to neighboring states to gamble. This will be dealt with in more detail in later sections of the report.)

Some proponents of the cannibalization theory suggest that economic growth from casinos is unlikely under *any* circumstance. A related argument is that casinos cannot provide economic benefits unless they act as “exporters.” That is, casinos must attract tourists from out-of-state. This is a version of the “export base” theory of economic growth. Although exports do play a large role in some economies, they are not a prerequisite for growth. A common quip on this issue is that the global economy has seen significant growth without any exports to aliens. Therefore, exports cannot possibly be the only source of economic growth. More importantly, it is obvious that economic benefits may accrue to a state such as Massachusetts if casinos merely keep some of the state’s gamblers in-state, rather than driving to Connecticut casinos. Of course, additional benefits may accrue if tourism can be enhanced by the introduction of casinos.

One will occasionally hear comments surrounding the effects of casino gambling that focus on the flow of money. This is a variant on the export base theory. There are a number of surprising examples in the literature where obvious errors have been made in emphasizing the importance of simple money flows. One example is from a report written on the South Carolina video gaming machine debate in the late 1990s, just prior to the state banning the machines. The report suggested that the purchase of the machines represented a social cost to the state because the machines had to be purchased from out-of-state and money was therefore leaving the state.¹⁰⁵ The analogous argument is that casinos are beneficial only if there is net monetary inflow. Among the numerous other problems with this view, the most obvious is that market transactions are mutually beneficial. This means that the buyer places a higher value on what is being purchased than on the money being used to buy the object. So the flow of money is not as important as one might initially suspect.

Firms in industries that expect to compete with casinos are understandably concerned that consumers may divert their expenditures away from a variety of goods and services in favor of casino gambling. However, casinos represent an increase in competition just like any other new industry. Would people become concerned when a new restaurant chain announces it wishes to open 25 new restaurants in Massachusetts? Why is this case any different than casinos?

Conceptually, the two cases are identical. However, the current ban on casinos gives a strong status quo bias against introducing casinos.¹⁰⁶ Another difference is that the casinos would be very large and limited in number; they are well-known for attracting customers from a long distance, much more so than the typical restaurant. A third distinction is the potential for problem gambling behaviors to become more common if casinos are introduced within Massachusetts, as noted previously.

From an economic perspective, it is understandable that existing firms would prefer not to have additional competition. Since a change in law is necessary to introduce casinos, lobbying efforts by opponents of casino gambling are likely to be much more effective than if similar efforts are taken to prevent new restaurants from opening.

Spectrum also recognizes that the proposed legislation would create regional monopolies among gaming properties, ensuring that no other casinos would be built within a proscribed geographic area. As we noted, this creates additional responsibilities for both the operator and the Commonwealth to help protect the interests of existing businesses that enjoy no such geographic protection.

Whatever the motivation of those who raise the “substitution effect” issue, the essence of the argument is conceptually valid. Obviously a new firm or industry will cause a reallocation of consumer spending. With the reallocation in spending comes a potential change in tax revenues, employment, and wages.

¹⁰⁵ William Thompson and Frank Quinn (2000), “The Video Gaming Machines of South Carolina: Disappearing Soon? Good Riddance or Bad News? A Socio-Economic Analysis.” Paper presented at the 11th International Conference on Gambling and Risk-Taking. Las Vegas, NV.

¹⁰⁶ As a related example, consider the legality of alcohol, even though it arguably causes incalculably more harm than problem gambling has ever been accused of causing.

Consumer spending

Casinos in Massachusetts may, in fact, mean that revenues in competing firms and industries decline to some extent. At the same time, however, the introduction of new goods to the menu of available options for consumers may lead consumers to increase their overall expenditures. This effect would tend to lessen the amount of expenditures lost to competing industries. As yet, no empirical studies have addressed this issue in a rigorous way.

It is clear that the introduction of casinos in Massachusetts will create new competition for other entertainment industries, and even some other non-entertainment industries. Such firms will face increased competition, just as they do anytime any new firm enters the market. Those firms or industries that do not effectively compete against the casinos can be expected to see a decrease in revenues, and may be unable to remain profitable in some cases.

Employment and wages

It has been indicated above that the introduction of casinos in Massachusetts is likely to lead to some measure of substitution away from other industries. To the extent that this occurs, one would expect a similar shift in employment from some industries to others. Typically in market economies, employment shifts among industries reflect the preferences of consumers; where consumers spend their money is where the jobs go. Firms or industries that cannot compete effectively with casinos may, in fact, see a decline in employment along with revenues.

This substitution effect with respect to jobs is arguably one of the primary concerns in the consideration of casino adoption/expansion. But to what extent does a shift of jobs among industries present reason for concern? One issue that has been raised is that casino jobs are relatively low-skill and low-paid. Yet, workers would not choose to take those jobs if they did not offer some advantage over existing jobs.

However, if competing industries fail because of the competition from casinos, then the jobs in competing industries disappear. If the jobs that casinos create simply replace existing jobs, then casinos do not change net employment. Alternatively, even if the casinos do have a net positive impact on the number of jobs in Massachusetts, there is no guarantee that these jobs will be better than the existing jobs in the state.

In reality, the introduction of casinos is likely to have little substitution effect on other industries. That is, while there may be some declines in revenues and employment in some firms and industries, it is unlikely that entire industries will shut-down. Therefore, one can view the likely employment effects of casinos as being positive, since the casinos will increase competition among firms for qualified employees. This should lead to higher wages and less unemployment in the state.

Tax revenues

To the extent that the primary motivation for casino legalization is a potential fiscal crisis or a desire to increase tax receipts, then voters and politicians may have an interest in understanding what the likely tax effects from casinos are. This issue has been addressed in a variety of studies,

as reviewed in the previous section of the study (lottery). The key factors that will determine whether casinos will increase tax revenue are (i) the relevant tax rates applied; (ii) the extent to which “substitution” occurs among industries; (iii) the degree to which the casino industry attracts tourists; and (iv), the extent to which Massachusetts residents remain in-state, rather than traveling out-of-state, to gamble at casinos.

Since the proposed tax rate on gross gaming revenues (27 percent) exceeds the general sales tax in Massachusetts (5 percent)¹⁰⁷, one would expect the casino industry to result in a net increase in tax revenues to the extent that the substitution effect exists and applies to goods and services on which the standard sales tax is applied.

The casinos would be expected to lead to net increases in state tax receipts to the extent that they attract new tourists, and to the extent that the casinos attract tourist spending away from other firms/industries. (The net tax revenue increase in the latter case would be the differential between the tax rates on casino revenues and the alternative industry, times the amount of diverted expenditure.)

Another source of increased tax revenues from casino introduction would be from those Massachusetts residents who currently travel out-of-state to gamble at casinos. In one report, this amount was estimated to be quite large (\$846.2 million dollars per year), which could mean a significant increase in Massachusetts tax receipts if most of these individuals stay home and visit Massachusetts casinos instead.¹⁰⁸ This component is the one area that would provide the greatest benefits to the state from legalized casinos.

The only case in which “substitution” could have a negative impact on tax receipts is with the state’s lottery, as discussed previously. However, we expect the impact on the lottery to be minimal, as discussed earlier.

Competition in market economies

It is important for voters and policymakers to be aware of the likely economic effects of introducing casinos in Massachusetts prior to enacting such a policy change. One of the most important considerations has been the extent to which the “substitution effect” described above will cause declines in other industries as the casinos are opened.

Two decades ago, a Spectrum managing director noted in an analysis on the initial impacts of casinos on the economy of Atlantic City that competition increases when gaming is introduced:

“The new competition has touched virtually every segment of the economy in a big way. Everything from huge banking conglomerates from Newark to large, multi-national home building corporations to national drug store chains entered a market that had forever been the private domain of small entrepreneurs. ... An appliance store’s sales of refrigerators and television sets would be expected to increase with the coming of casinos. What it

¹⁰⁷ County and city governments may impose their own supplemental sales taxes.

¹⁰⁸ Clyde Barrow (2007), “New England Casino Gaming Update, 2007,” Center for Policy Analysis. University of Massachusetts, Dartmouth.

should also have expected was more – and possibly better – appliance stores coming into the area that was traditionally a one-store domain.”¹⁰⁹

A good understanding of the substitution effect requires an understanding of how market economies operate at a fundamental level.

Review of market economics

Transactions that occur in market economies are mutually beneficial. This means that both parties expect to benefit by engaging in the transaction; otherwise they would not agree to the trade. This basic principle is true whether we are discussing the purchase of a \$20,000 car, a \$1 can of soda, a \$40 haircut, or a \$20 bet at a casino. Each is an example of a market transaction; the first two examples are goods, the latter two services. Because both parties willingly engage in market transactions, generally, both parties are expected to benefit. That is, when one purchases a car for \$20,000, the buyer expects benefits to exceed the \$20,000 paid, while the seller prefers the money to the car. The seller earns profit (the difference between the selling price and the cost of production), and the buyer similarly earns a “profit” (the difference between the value of the good to the consumer and the price paid). Although the consumer’s profit is more abstract (termed “consumer’s surplus” by economists), it is no less real than the producer’s profit. The consumer’s and producer’s profit together represent the social benefit from the market transaction. Thus, such transactions enhance society’s welfare because the two parties involved are better-off.

The same analysis applies to bets placed at casinos. Obviously each bet carries a negative expected value for the patron; on average the typical bettor can expect to lose a percentage of each dollar bet, depending on the game and playing strategy. The typical casino gambler does not play simply to increase their monetary holdings. Most players understand that the games have negative expected returns. The reasons they are willing to pay to play casino games may vary by individual. Some people like the social aspect of being at a casino and others may like the chance of winning money, but most are paying for the excitement of engaging in activity with an uncertain outcome. That is, will the card dealt next to their ace be a jack? Will the third reel also stop on cherries? Will the dice again show 7?

In this sense, the product sold at a casino is similar to that sold at a movie theater. It is an experience for which people are willing to pay even if different people are buying different “products.” What the customer expects or hopes to receive is a benefit or product – social interaction, fun, entertainment, a chance to win money, etc. – worth more than the amount of money than is spent (lost).

Sometimes people regret transactions in which they have engaged. But a bad outcome does not necessarily reflect a bad decision. Nor does regret negate the above analysis. To the contrary, economists assume that consumers typically learn from their mistakes. In the case of the casino game player, if the entertainment, social interaction, etc., derived from playing the casino game does not exceed the price paid (the amount the consumer loses), then he or she will quit gambling. The caveat here is that some individuals develop problem gambling behaviors –

¹⁰⁹ “Hostage to Fortune: Atlantic City and Casino Gambling,” by Michael Pollock, Center for Analysis of Public Issues, Princeton, NJ, 1987.

effectively becoming “addicted” to gambling. Relatively few individuals develop such problems. (The National Gambling Impact Study Commission in 1999 reported that 1.2 percent of U.S. adults are “lifetime” pathological gamblers [that is, they have met the psychological criteria for pathological gambling at some point in their lives] and another 1.5 percent of U.S. adults are lifetime problem gamblers, which means they met fewer criteria than pathological gamblers.¹¹⁰ The Commission noted that estimating the prevalence of gambling problems is a “contentious subject.”)

Free market transactions are a primary source of economic growth, which is manifest in rising per capita incomes. Transactions in goods and services are conceptually the same; yet, many observers seem to discount or ignore the fact that an increase in the quality or quantity of services represents an increase in wealth or living standards – just as an increase in tangible goods does.

Consumers vote with their dollars. Industries that please consumers expand while those that do not can be expected to contract. This may be bad for selected producers/sellers, but it is to the best interest of society that this process be allowed to occur. The concern over substitution is no more warranted in the case of casinos than it would be any time *any* new business opens in a local economy. Ultimately, the change in the allocation of expenditures is a good thing because it is the result of consumers’ self-interested spending decisions. Efficiently functioning economies – which produce the highest standards of living in the world – produce what consumers want, and the “destruction” of certain industries frees up resources to be used in more productive ways. Although some sellers, especially those having a difficult time competing, may not be sympathetic to this view, it is essentially the well-accepted theory of creative destruction outlined by the Austrian economist Joseph Schumpeter.¹¹¹

Robert Detlefsen provides an insightful explanation of substitution in the context of casino gambling:¹¹²

“Invocation of the substitution effect [argument in the context of casino gambling] 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 proportion 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 U.S. economy ultimately remains in the spending preferences expressed by individual consumers.”

Perhaps equally important, when a new industry enters a market, scarce productive resources, such as labor, land and capital, are reallocated among the different industries. If

¹¹⁰ The National Gambling Impact Study Commission, Final Report, June 1999, p. 4-4.

¹¹¹ See Joseph Schumpeter (1934 [1983]), *The Theory of Economic Development*. New Brunswick, NJ: Transaction Publishers.

¹¹² See R. Detlefsen (1996), “Anti-Gambling Politics – Time to Reshuffle the Deck.” Washington, DC: Competitive Enterprise Institute.

resources are allocated according to consumers' preferences, overall welfare increases, despite unfortunate losses by some firms and industries.

In terms of shifting employment due to the introduction of casinos, the reshuffling of jobs across industries is a necessary component of free markets that helps to ensure an efficient allocation of scarce productive resources.

In general, increased competition resulting from a new industry tends to improve conditions for workers, as employers competing for a given pool of available workers. Typically, wages, benefits, and working conditions improve as the number of firms competing for workers increases. This suggests that the overall effect of casinos in Massachusetts is to increase the overall employment picture for the state. We recognize, at the same time, that businesses that are marginally profitable and tend to be operate in areas where there is less demand for labor might face sizable increases in their labor costs if they must compete against casinos that pay competitive wages plus benefits.

Casinos are, by their nature, relatively labor intensive. This means that they tend to use a higher proportion of labor to other input resources than other industries do. For example, compared to a movie theater, casinos require substantially more labor to operate. In terms of worker per dollar of revenue, however, the intensity of labor in casinos relative to other industries is not so straightforward. In any case, the state of Massachusetts and the communities in the state that are potential sites for casinos may be more concerned with the net number of jobs created, rather than jobs per dollar of revenue.

The argument here is not that the introduction of casinos will have only positive effects for everyone, or that Massachusetts policymakers needn't be concerned with the plight of industries that will have to compete with casinos. The important point is that increased competition – be it in the entertainment, automobile, or energy production sector – is in the best interest of consumers and society. This is because consumers always have an interest in abundance and lower prices for goods and services, but producers have an interest in scarcity and higher prices for what they are producing. This simple idea helps to explain why firms competing with casinos can be expected to oppose casinos in Massachusetts.

Capital inflow

One effect of casino development is the inflow of capital investment to the region or state. The building of huge casinos is an example of this capital inflow. This capital expansion in effect increases the productive capacity in the state economy. Once casinos are established, the potential for other firms to enter the market may rise or fall. It would depend, to an extent, on local/regional market conditions. On the other hand, one could argue that if casinos enter the economy, there are fewer resources available to be devoted to other goods and services in the economy. Still, one could argue that the productive resources (capital or labor) should move into industries that tend to please consumers the most; this is required for economic efficiency.

In the Massachusetts case, the proposal is to build three casinos costing at least \$1 billion each. This will represent significant capital inflow to the state.

Tax substitution

As discussed elsewhere, tax revenues are a primary goal in introducing casinos. There is an additional argument that one could make to favor taxes on casino revenues over taxes on transactions for other goods and services. For example, if there is a choice between an

“avoidable” tax like a tax on lotteries or casino owners where taxes fall on the consumers or sellers of specific goods, and an “unavoidable” tax like a sales tax, then many people may prefer the lottery tax or taxes on casino revenues (“avoidable taxes”) over a general sales tax (“unavoidable taxes”). Of course, from a consumer’s perspective, a sales tax *is* avoidable, but not easily, and less so than a casino tax. Simply put, gambling taxes may be preferable simply because they are so easy for consumers to avoid.

In the Massachusetts case, casino taxes are to be used, in part, for property tax relief. Residents may see this as a benefit of the introduction of casinos, even if casinos cause a substitution effect away from other industries. That is, residents may favor introducing a new “avoidable” tax in return for reducing a different “unavoidable” tax.

Import substitution

Perhaps one of the strongest arguments for legalizing casinos in a particular state is that the residents enjoy gambling and they are currently going outside to gamble. If instead they had the opportunity to gamble at a casino in their home state, the local benefits would be greater. So instead of “importing” gambling services (i.e., purchasing these services from outside providers – like in Connecticut) they substitute the imports with locally provided gambling services. This is often called “import substitution.” This may result in positive economic effects from casino expansion, including capital development, increased demand in labor markets, and increased tax revenue. The tax revenue “kept home” is one of the primary arguments used by supporters of legalized casinos, and is likely to be significant in the case of Massachusetts, as we note in more detail elsewhere.

Increased transactions volume

Schumpeter¹¹³ lists five primary sources of economic development. These include the introduction of a new good to an economy. A common feature of all the paths to growth listed by Schumpeter is that each implies an increase in the number of mutually beneficial, voluntary transactions. This is perhaps the greatest benefit of introducing casinos, despite the political arguments on other issues.

Consumer profit and variety benefits

Each voluntary transaction involves expected profit to both the buyer and seller, as discussed above.¹¹⁴ Normally, consumers benefit when increased competition in markets leads to lower prices. This is one source of consumer profit, illustrated in two examples. First, sometimes casinos advertise particular games and offer better odds than competing casinos. If the effective price of playing the casino games falls, then consumer’s profit rises. (This could occur, for example, if new casinos in Massachusetts advertise that their games pay better odds than the casinos in Connecticut.) Of course, lower “prices” of casinos could be a catalyst for other entertainment firms to lower their prices too.

Second, casinos are often bundled with other products like hotels and restaurants. In the Massachusetts case, the expectation is that the casinos will be destination resorts, so proposals must include complementary products to be offered along with the casinos. To the extent that

¹¹³ See Schumpeter, *The Theory of Economic Development*. (1934, p.6)

¹¹⁴ Here, for consistency and to avoid economics jargon, we call these values “profit” for consumers and producers.

casino competition increases competition in the local restaurant and hotel markets, whether through price decreases, quality increases, better service, etc., the casinos will spur higher benefits to consumers in the form of “consumer profit” because of the downward pressure on prices and pressure to increase the quality of products. These benefits have been ignored in most of the cost-benefit studies of casinos and in the discourse in Massachusetts.

Another potential benefit casinos may provide to consumers is related to product variety. When casino gambling is introduced to a state, it has the effect of increasing the product choices for consumers. This “variety benefit” could be significant but it is difficult to measure.

Earl Grinols examines the potential for “distance” consumer profit.¹¹⁵ Consumers who would otherwise travel to Connecticut or elsewhere to gamble at casinos will obviously benefit by having casinos within a shorter distance. This argument becomes even more important as gas prices rise to historically high levels.

Unfortunately, these types of consumer benefits in the U.S. have not generally been subject to measurement by economists. However, simply because they have not been measured does not mean that they do not exist or that they should be ignored in the current policy debate over casinos in Massachusetts.

The “substitution effect” should be considered within the context of this more general understanding of market economics. To reiterate, it is certainly true that some industries may see intense competition from new casinos; and these industries may see a loss in revenues and some may even be forced out of business. But if casino revenues are the result of consumers “voting with their dollars,” then the reallocation of resources among industries is good for the overall economy.

We are not suggesting that the substitution effect possibility should be ignored. Rather, we suggest that the real economic effects of casinos are not likely to be limited to the substitution effect. Indeed, there are a variety of very important consumer benefits from introducing a new good. These should be considered along with substitution issues. Overall, the existing empirical evidence suggests that the benefits of casino introduction are likely to outweigh the costs. But the empirical estimates on these effects are tentative. Theoretically, it is much clearer that the benefits are likely to outweigh the costs of casinos in Massachusetts.

Anticipated impact on restaurants, hotels, related businesses

Above we have discussed general effects of casinos being introduced in Massachusetts. In this section we begin to narrow the discussion so as to focus more on specific industries that may be adversely affected by the introduction of casinos.

It is important to note that the effect of casinos – whether a substitution or complementary effect – is likely to be felt within a relatively short distance of the casinos. Without knowing where the three Massachusetts casinos would be located, we cannot project the specific local impacts on businesses. We can, however, state that any adverse effects casinos

¹¹⁵ See a discussion of this in Douglas Walker (2007), *The Economics of Casino Gambling* (p. 162). New York, NY: Springer. Grinols calls this “distance consumer surplus,” but I use “profit” here for consistency.

may have on other industries could be significantly mitigated if the locations for the casinos are chosen wisely, with an eye for strategic placement.

The same argument would apply to restaurants. Casino resorts typically offer a number of restaurants that will cater to all types of casino customers, so that the casino patrons tend to spend most of their “vacation dollars” at the casino or its affiliated businesses. One proposal to ensure some complementary effect is to have the casino complex dedicate a minimum amount of space to be leased by local restaurants or firms. This issue is addressed elsewhere in this report.

One of the major recommendations in this report is that casino development be designed to increase tourism, including the frequency of visitation, increase in the length of visitors’ stays, expansion of the traditional core demographic base, and targeting additional markets including convention attendees.

In this section we examine the economic implications on restaurants, hotels, and other entertainment firms – or more generally, the hospitality and entertainment industries – potentially affected by the introduction of casinos.

Labor market effects

Interviews with the Massachusetts Restaurant Association and others indicated that there are serious concerns regarding casinos, in areas ranging from competition for customers to competition for employees. Such concerns must be addressed, in part through sustained efforts by casino licensees and the Commonwealth to increase the available pool of labor through workforce development efforts that can train unemployed and underemployed adults (as noted in more detail elsewhere). We note that the impact on labor is likely to be more pronounced in less populated areas. The following charts, for example, show a range in compensation among the same jobs throughout the Commonwealth.

The first table looks at all food-preparation and serving workers by area:

<i>Food preparation and food service workers, including fast food</i>	<i>Mean hourly rate</i>	<i>Mean annual wage</i>	<i>Median hourly rate</i>	<i>Median annual wage</i>
Barnstable Town, MA	\$ 9.29	\$ 19,330	\$ 8.68	\$ 18,050
Boston-Cambridge-Quincy, MA	\$ 9.07	\$ 18,860	\$ 8.47	\$ 17,620
Brockton-Bridgewater-Easton, MA	\$ 8.73	\$ 18,150	\$ 8.32	\$ 17,310
Framingham, MA NECTA Division	\$ 9.20	\$ 19,140	\$ 8.48	\$ 17,640
Haverhill-North Andover-Amesbury, MA-NH	\$ 9.09	\$ 18,900	\$ 8.59	\$ 17,880
Lawrence-Methuen-Salem, MA-NH NECTA	\$ 8.36	\$ 17,390	\$ 8.20	\$ 17,050
Leominster-Fitchburg-Gardner, MA	\$ 8.20	\$ 17,060	\$ 8.04	\$ 16,720
Lowell-Billerica-Chelmsford, MA-NH	\$ 8.49	\$ 17,670	\$ 8.25	\$ 17,160
Lynn-Peabody-Salem, MA	\$ 9.15	\$ 19,030	\$ 8.60	\$ 17,900
New Bedford, MA	\$ 8.82	\$ 18,340	\$ 8.34	\$ 17,350
Pittsfield, MA	\$ 8.55	\$ 17,780	\$ 8.35	\$ 17,360
Springfield, MA-CT	\$ 8.66	\$ 18,020	\$ 8.18	\$ 17,010
Taunton-Norton-Raynham, MA	\$ 8.90	\$ 18,510	\$ 8.52	\$ 17,720
Worcester, MA-CT	\$ 8.88	\$ 18,480	\$ 8.57	\$ 17,830

Source: Bureau of Labor Statistics

The differences can be more pronounced within individual job categories. We looked at the following examples:

Short-order cooks	Mean hourly rate	Mean annual wage	Median hourly rate	Median annual wage
Barnstable Town, MA	\$ 11.75	\$ 24,440	\$ 11.52	\$ 23,950
Boston-Cambridge-Quincy, MA	\$ 11.86	\$ 24,670	\$ 11.65	\$ 24,240
Brockton-Bridgewater-Easton, MA	\$ 9.02	\$ 18,770	\$ 8.39	\$ 17,450
Framingham, MA	\$ 11.18	\$ 23,250	\$ 11.46	\$ 23,830
Haverhill-North Andover-Amesbury, MA-NH	\$ 10.18	\$ 21,170	\$ 9.99	\$ 20,770
Lowell-Billerica-Chelmsford, MA-NH	\$ 10.45	\$ 21,750	\$ 10.37	\$ 21,560
Lynn-Peabody-Salem, MA	\$ 10.44	\$ 21,710	\$ 10.33	\$ 21,500
New Bedford, MA	\$ 9.77	\$ 20,330	\$ 9.85	\$ 20,480
Pittsfield, MA	\$ 10.36	\$ 21,540	\$ 10.22	\$ 21,250
Springfield, MA-CT	\$ 10.25	\$ 21,310	\$ 9.93	\$ 20,660
Taunton-Norton-Raynham, MA	\$ 10.71	\$ 22,280	\$ 11.33	\$ 23,560
Worcester, MA-CT	\$ 11.22	\$ 23,350	\$ 11.63	\$ 24,190

Source: Bureau of Labor Statistics

Short-order cooks in Brockton, for example, might earn \$4,000 less per year than their counterparts in Boston, while a New Bedford short-order cook might earn \$3,000 less. A casino would likely pay wages closer to the prevailing rates in Boston, regardless of their location, in order to help ensure an adequate supply of labor. This would have a more pronounced upward effect on wages at existing establishments in order to retain a sufficient workforce.

We see similar discrepancies among hosts and hostesses:

Hosts and hostesses	Mean hourly rate	Mean annual wage	Median hourly rate	Median annual wage
Barnstable Town, MA	\$ 10.69	\$ 22,230	\$ 10.00	\$ 20,790
Boston-Cambridge-Quincy, MA	\$ 9.90	\$ 20,600	\$ 9.64	\$ 20,050
Brockton-Bridgewater-Easton, MA	\$ 9.90	\$ 20,600	\$ 9.61	\$ 19,980
Framingham, MA NECTA Division	\$ 9.32	\$ 19,390	\$ 9.24	\$ 19,230
Haverhill-North Andover-Amesbury, MA-NH	\$ 8.85	\$ 18,420	\$ 8.65	\$ 17,990
Lawrence-Methuen-Salem, MA-NH NECTA	\$ 9.56	\$ 19,890	\$ 9.26	\$ 19,260
Leominster-Fitchburg-Gardner, MA	\$ 8.68	\$ 18,060	\$ 8.53	\$ 17,740
Lowell-Billerica-Chelmsford, MA-NH	\$ 9.83	\$ 20,440	\$ 9.02	\$ 18,760
Lynn-Peabody-Salem, MA	\$ 9.63	\$ 20,020	\$ 9.26	\$ 19,260
New Bedford, MA	\$ 9.56	\$ 19,890	\$ 9.57	\$ 19,900
Pittsfield, MA	\$ 9.03	\$ 18,780	\$ 8.89	\$ 18,490
Springfield, MA-CT	\$ 8.94	\$ 18,600	\$ 8.59	\$ 17,860
Taunton-Norton-Raynham, MA	\$ 11.35	\$ 23,610	\$ 11.88	\$ 24,710
Worcester, MA-CT	\$ 9.72	\$ 20,210	\$ 9.11	\$ 18,950

Source: Bureau of Labor Statistics

Elsewhere in this report there are detailed estimates of the number of jobs that can reasonably be expected for casino operations and the initial construction of the casinos.

This represents a significant economic stimulus to the Massachusetts economy. However, it is unclear the extent to which such jobs will be coming from a pool of currently unemployed workers, or from workers with existing jobs. We consider both possibilities.

First, to the extent that the jobs in casino construction and operation come from the pool of unemployed individuals in Massachusetts, the casinos represent a clear economic stimulus for

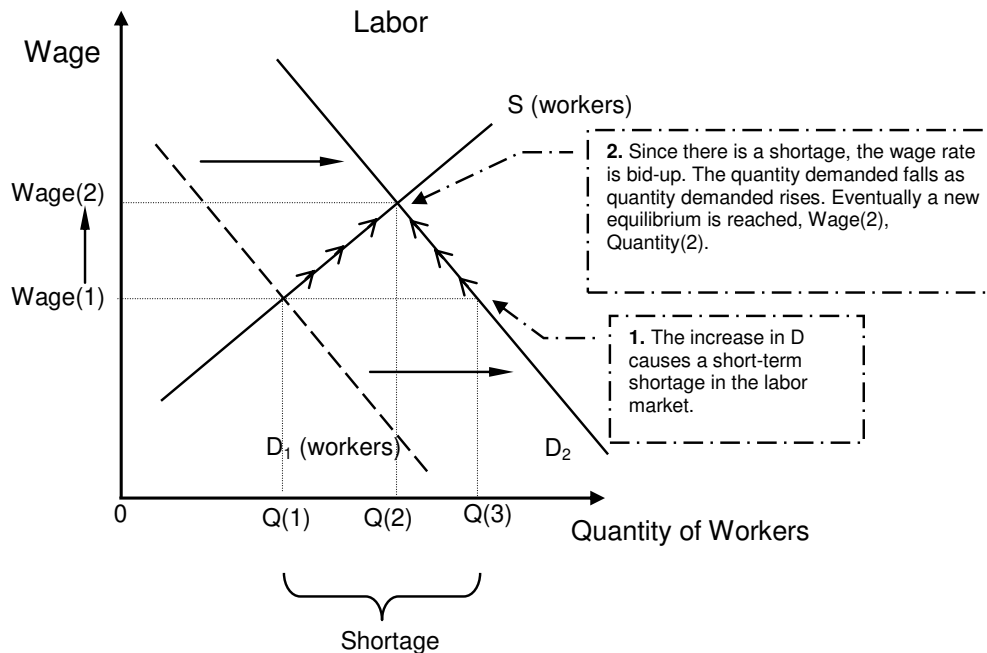
the state. The workers who receive the jobs obviously benefit, as they become productive members of society and earn a good wage. In addition, these workers' wages are taxed which helps to support the state's budget both on the tax side (additional revenues) and the benefits side (less unemployment compensation paid-out). These benefits apply to both the construction and casino operation jobs.

Subsequent to the construction of the casinos, it is difficult to predict how the construction jobs will change. Some workers may be able to get other jobs; others may become unemployed. In either case, the endeavor of casino construction is helpful to this segment of the workers.

To the extent that the workers for constructing and operating the casinos are hired from the existing pool of employed workers, again the casino projects will provide benefits. In terms of construction jobs, if workers willingly choose to take the jobs, they are thereby signaling that the new job is superior to their current job. (We do not need to know exactly why each worker has decided to change jobs. It may be for a higher salary or benefits, or other preferences.)

The same argument applies to other workers who take jobs operating the casinos. If those workers willingly choose to leave their current job to work at the casino, we can safely assume that the new job is preferred to the job they left.

We can illustrate the effect of casinos on the local/state labor market with a standard market graph from economics. With the supply and demand for workers (supply comes from individual workers; demand comes from firms wishing to hire workers) shown in a graph with wage levels on the vertical axis, and number of workers on the horizontal axis, the opening of casinos will affect the labor market by increasing the demand for workers. As the demand for workers increases, the number of jobs increases and the average wage rate can be expected to increase. Both effects are beneficial to the labor market and the local economy.



After the casinos open, existing firms in the regions surrounding the casinos may face higher labor costs, as the competition for workers will have increased significantly. Typically, higher wages will attract workers from surrounding areas, especially those in which unemployment is relatively high. If the number of workers increases, or if previously unemployed workers take jobs, the supply curve in the above graph would shift to the right (increase), causing the wage rate to fall back near its original level, Wage (1).

It is highly unlikely that there will be negative effects on the labor market as a result of the casinos being built and operated in Massachusetts, if public agencies and casinos make concerted efforts to train and hire from the ranks of the unemployed and underemployed. During the building phase and early operational stages, workers will be attracted from the unemployed, from the employed in less preferred jobs, and possibly from workers outside the region attracted by the prospect of significantly better jobs than their current ones. At these early stages, the casinos are unlikely to have much of any effect on other regional businesses. Thus, the introduction of casinos is clearly beneficial to workers. What about other firms that will have to compete with the casinos once they are operational?

Changes in consumer spending

Earlier, we discussed conceptual issues surrounding consumers' spending and economic growth. We revisit this discussion but include more details applied to casinos in Massachusetts. To understand how the substitution effect may be applicable in the Massachusetts case, it is useful to decompose total spending into several distinct scenarios, with respect to how expenditures would shift to affect non-casino businesses:

- (1) Suppose people currently leaving Massachusetts to gamble in Connecticut and in other states do not change their behavior. The remaining non-gambling Massachusetts population goes to casinos and reduces their spending at other businesses in proportion to their casino expenditures. Assume these are the only casino customers.

- (2) Suppose casinos do not entice any new residents to gamble, but those who were previously going out-of-state now gamble the same amount in-state only.
- (3) Suppose new tourists are drawn in-state from neighboring states and/or more conventions are held in Boston because it becomes a more attractive option now that an additional entertainment venue has been introduced.
- (4) Suppose the casino revenues are explained by a mix of all of the above scenarios.

In scenario (1), the substitution effect is certain to have a negative impact on non-casino businesses. Furthermore, in this case the casinos are not keeping any gamblers in-state. This is the worst situation for other Massachusetts businesses, but is extremely unlikely. Moreover, even if this case was real, consumers are still benefiting from the change. Scenario (2) is a reasonable possibility, at least to some extent. One would expect many gamblers to stay in-state. Whether or not new gamblers frequent the casinos, new tax revenues are created. In scenario (3), additional tax receipts and revenues for casinos and non-casino businesses increase as spending is attracted from out-of-state. This scenario is likely to occur, to a moderate extent, and is clearly beneficial to the state. Scenario (4), or a bit of each of the other effects, is likely to occur. The net effect is almost certainly positive; the substitution effect is likely to be minor.

Empirical evidence

In a previous section we reviewed some of the academic literature on the relationships between casinos and lotteries, as well as casinos and other industries. There was also some discussion of tax effects. (See the previous section on lottery substitution.) We now review a new study that examines the employment effects of casinos being introduced into a local economy.

This fall, a new study will be published in *Journal of Gambling Business and Economics*, a peer-reviewed academic journal. The study is by economist Chad Cotti, and provides the most comprehensive analysis of the employment and labor earnings effects of casinos.¹¹⁶ Although some of the previously-cited studies have addressed these issues, most studies are very limited in their scope (e.g., they examine a single state only). Cotti's analysis covers all U.S. counties from 1990 through 1996, a period which encompasses much of the U.S. casino expansion. Hence, we view this as being the best study to look to in developing expectations as to how casinos will affect earnings and employment in Massachusetts.

Cotti uses county level employment and average weekly earnings data for all U.S. counties. There are 161 counties which have casinos during his study period. He examines the differences in these variables between casino and non-casino counties. His analysis focuses on employment and earnings on three different levels: (i) county level; (ii) the entertainment sector, comprised of arts, entertainment, and recreation; and (iii) the hospitality sector, comprised of accommodation and food services.

Among his results, Cotti finds that total county employment in casino counties rises 8.21 percent relative to non-casino counties, and county earnings in casino counties rise 0.79 percent faster in casino than in non-casino counties. Cotti summarizes, "On average, casinos play a

¹¹⁶ See Chad Cotti (2008), "The Effect of Casinos on Local Labor Markets: A County Level Analysis." *Journal of Gambling Business and Economics* (forthcoming).

significant role in increasing both employment, earnings, and promoting economic development in a county” (p. 15). However, a caveat applies, as the casino employment and wages are included in these county-level data. Still, positive results suggest that the casinos have a net positive impact, even accounting for any industry substitution that might exist.

Cotti’s results also show that casinos increase employment in the entertainment sector by over 50 percent relative to the control (non-casino) counties, and earnings increase 19 percent more in casino counties than in non-casino counties. As for the hospitality sector, Cotti finds that the employment is insignificant, but that earnings are positive and significant. This is consistent with the idea that casinos increase the demand for labor, pushing wages higher.

To assess the robustness of his results, Cotti adjusts the model to include county-level trends in employment. With this adjustment, he still finds the same qualitative effects, but smaller in magnitude.

Cotti also considers a time trend, by including data for one year prior to and five years after casinos are introduced. This time component does not change the above conclusions markedly. However, the results do support the evidence previously reviewed (Walker and Jackson 1998, 2007), that there are short-term positive economic growth effects at the state level, but that the effects appear to diminish in the longer-run.

The analysis is repeated after partitioning the data into three groups, according to county population. The results suggest that the positive employment and earnings effects are significantly greater for rural casinos than they are for urban casinos. This makes sense, as a large casino is likely to represent a significant component of a rural county economy, compared to a large urban county economy.

The next step in Cotti’s analysis is to assess the extent to which the increased employment at the county level and in the entertainment sector is coming at the expense of other sub-sectors. (Even though there is a net positive employment and wage effect at the county level, there may still be some measure of substitution among industries.) Cotti finds that there is an insignificant effect on the sub-sectors tested, including museums, zoos, parks, golf courses, ski resorts, marinas, fitness centers, and bowling alleys. Of course, these sub-sectors do not cover all entertainment and recreation sectors. But the positive coefficient on the “casino effect” in his model suggests a complimentary effect – if any – on other competing entertainment industries.

The only sector in which there is any hint of substitution is for bars and restaurants. For these, Cotti finds a negative coefficient on employment, but the results are not statistically different from zero.

Finally, Cotti tests whether there are employment and/or earnings effects on counties neighboring casino counties. Theoretically, one could argue that any new employment or higher earnings are coming at the expense of neighboring counties, as workers migrate to the casino counties. Cotti’s results suggest that there are no significant neighboring county effects, with one exception. Employment in the entertainment sector in counties neighboring casino counties *increases*.

These results represent good news to Massachusetts businesses. Based on the most comprehensive study to date, which uses a nation-wide county-level sample, *there is no evidence of a significant substitution effect for employment and earnings between the casino sector and entertainment/hospitality sectors. The empirical evidence suggests that there is a moderate*

complementary effect. These results are based on solid, peer-reviewed academic research. However, as noted previously, these nationwide results will not necessarily be borne out in Massachusetts, but policy makers and voters can be optimistic about casinos because there is little evidence to support a substitution effect.¹¹⁷

Conclusions: substitution effect

It is critical that voters and policymakers try to account for the whole picture. It may be easy to focus only on the beneficiaries of the casinos, or what non-casino businesses stand to lose. But good policy is based on full consideration of both costs and benefits.

Massachusetts business owners may be concerned that casinos will adversely affect existing businesses. The best empirical evidence on the casino effect on entertainment and hospitality sector employment and earnings suggests that these fears are unwarranted. Based on nationwide data from 1990-96, the casino industry tends to supplement employment and earnings at the county level, and more specifically, in the entertainment and hospitality sectors. Some earlier, limited scope studies found otherwise, so it should be stressed that Massachusetts is unique, and the effect of casinos there may differ from that found in previous studies.

Even if casinos have a different effect in Massachusetts than they have had at the county-level nationwide, any substitution away from Massachusetts businesses to casinos can be offset if the casinos can do some combination of the following:

- Entice Massachusetts residents who currently travel out-of-state to stay in-state to gamble.
- Attract new tourists or conference attendees or entice existing tourists to spend more.
- Entice Massachusetts residents who currently do not visit casinos to become customers.

Regardless of which scenario is seen, the net benefits are likely to be greater the larger the share of the casino patrons come from outside the area. Individual businesses can avoid the negative effects from casinos by traditional ways of competition: offer higher quality products, better service, and more competitive pricing.

Our analysis of the substitution effect also supports the core thesis that destination casinos are more likely to advance public policy. Destination casinos would:

- Draw from a wider geographic area, thus diffusing any substitution.
- Draw from a broader demographic, thus diffusing the number and variety of industries that could arguably be deemed competitors. Destinations, for example, do not simply compete against other casinos, or against restaurants and taverns. They arguably compete against any business that targets discretionary income, from professional sports teams to golf courses, and so on.
- Hire more people, and return a larger portion of their revenue to the community in the form of purchases and payrolls.

¹¹⁷ The results of Cotti's study are generally confirmed by the smaller study by Garrett. See Thomas Garrett (2004), "Casino Gaming and Local Employment Trends." Federal Reserve Bank of St. Louis *Review*, vol. 86, no. 1, pp. 9-22.

We note a very important point that was articulated rather well by Michael E. Porter who makes the point that substitution is an omnipresent issue that must be viewed in a much larger context:

“Substitutes are always present, but they are easy to overlook because they may appear to very different from the industry’s product: To someone searching for a Father’s Day gift, neckties and power tools may be substitutes. It is a substitute to do without, to purchase a used product rather than a new one, or to do it yourself (bring the service or product in-house).¹¹⁸”

With that in mind, we caution that any analysis of the substitution effect defies simplification. If a casual dining establishment loses customers to casino restaurants, it is easy to identify a competitive culprit. But what if patrons of high-end restaurants decide to alter their spending patterns, and shift more dollars to casual restaurants to free up more discretionary income to visit a spa at a destination casino. Who benefits? Who suffers? What if income levels rise in a community, thus allowing more households to spend less money at supermarkets to prepare home-cooked meals while they increase spending at area restaurants? Again, in such situations, it is difficult to identify the competition.

We reiterate the core thesis that the most effective means of ameliorating any negative substitution is to authorize only destination casinos that have developed plans and strategies to grow the visitor base, expand employment and engage in joint marketing opportunities with other local businesses.

Policy implications: in-state spending

Questions have been raised, and suggestions have been made, as to policies that should be developed that favor Massachusetts residents and businesses. For example, the University of Massachusetts Dartmouth Center for Policy Analysis has made several gaming-related suggestions designed to advance public policy. For example, the center suggests that Massachusetts should “require each commercial resort casino to adopt a state and local vendor preference program for Massachusetts businesses as part of its commitment to spread small business growth, job creation and economic development. This program should also include a 5 percent set-aside for minority and women-owned businesses¹¹⁹.” The center also recommends hiring preferences for legal residents of the Commonwealth.

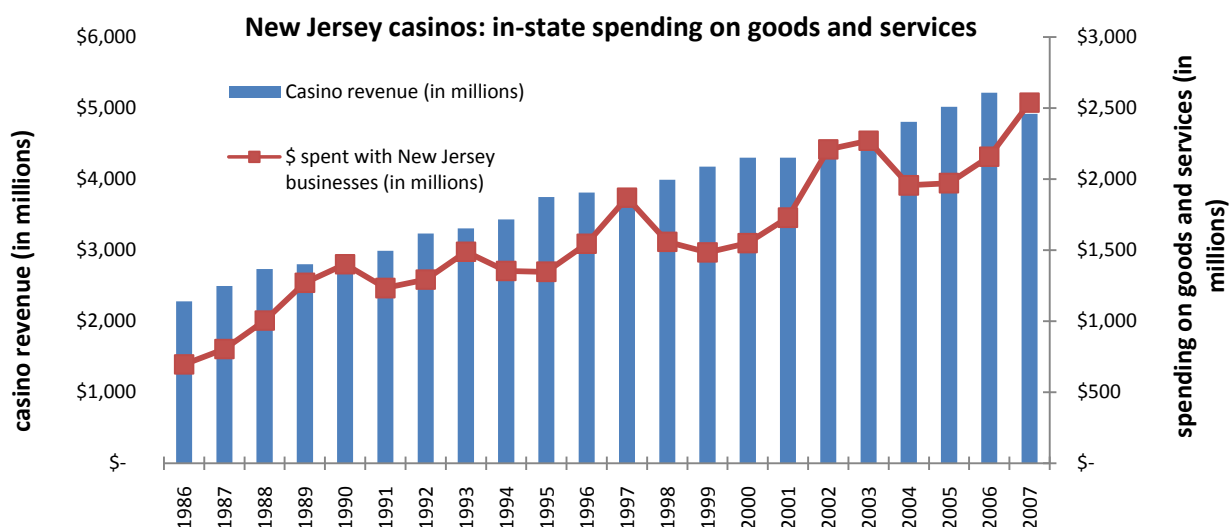
Such goals are indeed laudable, and would surely advance the public interest. However, we must note the practical limitations and implications of such policies. New Jersey, for example, offers no preferences for in-state or local vendors. And, even though New Jersey was a pioneer in the concept of requiring that casinos develop plans to do business with minority and women business enterprises, those requirements were successfully challenged. A court ruled that the state could not impose such requirements on private businesses in the absence of any evidence of prior discrimination.¹²⁰

¹¹⁸ “The Five Competitive Forces that Shape Strategy,” by Michael E. Porter, *Harvard Business Review*, January 2008, p. 84.

¹¹⁹ “Maximum Best: A Preliminary Blueprint for Casino Gaming and Economic Development in Massachusetts,” by Clyde W. Barrow, Center for Policy Analysis, August 2007, p. 6.

¹²⁰ *Association for Fairness in Business, Inc. v. The State of New Jersey*, *Gaming Law Review*, February 1, 2000

Still, we note that – even in the absence of mandates – the casino industry is likely to spend a significant portion of its purchases in-state. The following chart shows the past 21 years of spending by Atlantic City casinos in-state, absent any mandates:



Source: New Jersey Casino Control Commission

This data includes purchases in areas ranging from utilities to slot machines. In Massachusetts, we would expect that many of the purchases would mirror those of existing lodging and hospitality operators. Many of the vendors who already service this market – from linen suppliers to food wholesalers – will be in a strong position to service gaming properties. We do not expect, however, that the percentage of in-state spending will reach the level seen in New Jersey, largely because some slot suppliers and other gaming-related vendors have set up operations in that state to service the \$5 billion casino industry. That is not likely to be replicated in Massachusetts. Based on the experience of various gaming states, we can conservatively project that casinos would spend the equivalent of at least 15 percent of their gross gaming revenue on in-state purchases of goods and services. For a \$500 million casino, that would equate to at least \$75 million per year.

We also caution that mandates can often create unanticipated consequences. When Act 71 was adopted in 2004 in Pennsylvania, for example, it included requirements that casinos must purchase slot machines from in-state distributors. The requirement quickly became unworkable, generating complaints that the requirement unnecessarily increased the price of equipment, with distributorships being viewed as political sinecures. In 2006, the requirement was eliminated.

In terms of employment, preferences for Massachusetts residents could be best served by developing comprehensive training programs at the earliest possible dates. Absent that, casinos might import trained workers from other states who would quickly gain residency status, thus negating the perceived benefit of such mandated preferences.

Recommendation: Leverage conventions and meetings

Regional and national gaming destinations continue to focus on conventions and meetings as an integral part of their business strategy for a host of reasons, including the critical point that they can effectively expand a gaming market beyond what would otherwise be perceived as a saturation point. Note, for example, that the \$700 million, 825-room MGM Grand at Foxwoods, which opened in May 2008, includes a 50,000-square-foot ballroom, which will double the size of Foxwoods' existing Grand Ballroom. The Premier is being touted by Foxwoods as the largest column-free ballroom in North America.¹²¹ The MGM Grand will be blanketed with free wireless Internet, even outdoors at the Grand Lawn and a 5,500-square-foot pool.

In part, gaming and conventions are a natural fit because such meetings tend to focus on mid-week, while gaming tends to have its peak periods on weekends. Gaming can also boost the attractiveness of a destination by creating a perception of “value.” Las Vegas, as a destination, is not inexpensive. However, conventioners and other visitors perceive it as a value destination because the quality of the amenities, from the hotel rooms to the restaurants, is more likely to be viewed as high-end or luxury. Indeed, all other things being equal, a hotel with a casino can price its rooms, meals and other offerings at a more attractive rate than a non-casino hotel, simply because it has a casino as an additional revenue source.

That, of course, would be of scant comfort to non-casino hotels in Boston and other areas of Massachusetts that rely to varying degrees on the convention and meetings business. They would not have the same flexibility in pricing their rooms and other products. Instead, they would have to rely on a coordinated marketing approach that boosts the number of meetings and other events at area convention centers. We have visited both the Boston Convention & Exhibition Center (with 516,000 square feet of contiguous exhibition space) and the John B. Hynes Veterans Memorial Convention Center (with nearly 200,000 square feet of space), and recognize that Boston can compete for conventions at any level. Indeed, the 2004 Democratic National Convention, which was held in Boston, underscores that point.

Major cities that have long targeted conventions and meetings are increasingly viewing casinos as a competitive weapon. Cities such as Atlanta (ranked No. 5 among convention cities, according to *Tradeshaw Week* magazine) and Chicago (ranked No. 3) are considering adding gaming, in part to give them an edge over cities such as Boston (No. 7) that do not offer gaming. PKF Hospitality Inc. produced a study last year that projected one downtown Atlanta casino could generate \$1.7 billion into the local economy, including \$135.3 million in taxes.¹²²

We have not examined, and thus do not necessarily endorse, such findings. It is important to point out that the very existence of such studies is significant, in part, because they hold the potential to become self-fulfilling prophecies: The more convention destinations that offer gaming will prompt more cities to add gaming to their arsenal.

The growth opportunities are very real for both Boston, which has the wherewithal to target large national conventions, and for other areas of Massachusetts, that would more realistically focus on smaller, regional meetings.

¹²¹ “MGM at Foxwoods will aim at business market,” by Robert S. Anthony, *New York Daily News*, March 30, 2008

¹²² “Atlanta's rivals pondering casinos,” by Rachel Tobin Ramos, *Atlanta Business Chronicle*, August 17, 2007

A 2006 survey by PricewaterhouseCoopers of 100 convention centers shows that occupancy has been increasing among large centers (with more than 500,000 square feet of space), reporting a 44.4 percent occupancy rate in 2005-06, up from 43.9 percent in 2004-05. Overall demand increased by 1 point, reaching 38 percent. Nearly two-thirds of all convention centers last year reported that demand had reached or exceeded 2000 levels: a significant milestone, as that was pre-9/11.¹²³

Smaller and mid-sized convention centers showed sizable gains as well, according to the same report. Small centers (under 100,000 square feet) reported a 17 percent increase in occupancy, while demand at mid-sized centers (between 100,000 and 500,000 square feet) rose 6 percent. Their overall occupancy rates remain lower, however, with small centers reporting 27 percent occupancy and medium-sized centers reporting 28 percent.

The segment of conventions and meetings that require less than 50,000 square feet of space is both large and growing. The following table shows the percentage of events by the square footage of floor space.

Conventions and tradeshow by net square feet¹²⁴

Net Square Feet	% of Total Events
0-50,000	61.8
50- 100,000	19.6
100- 150,000	19.6
100- 150,000	3.9
200- 250,000	2.3
250- 300,000	2.2
300- 350,000	0.8
Over 350,000	3.3

The next table shows the average attendance by size of meeting:

Average attendance by size of meeting¹²⁵

Net Square Feet	Mean Attendance	Median Attendance
0- 50,000	3,242	2,500
50- 100,000	8,459	7,250
100- 150,000	14,090	11,800
150- 200,000	16,131	13,085
200- 250,000	21,717	20,000
250- 300,000	30,447	30,000
300- 350,000	15,104	46,120
Over 350,000	13,500	37,500

National studies indicate that the average delegate at a convention spends 3.56 nights¹²⁶ and spends the following, not including airfare to and from the host city, or other expenses incurred outside the host city:

¹²³ “The Ripple Effect,” by Dave Kovalski , www.meetingsnet.com , December 1, 2006

¹²⁴ Tradeshow Week

¹²⁵ Tradeshow Week

¹²⁶ Destination Marketing Association International Foundation

Type of expenditure	Total expenditures	Daily expenditures	% of total
Lodging and incidentals	\$ 450.10	\$ 126.45	47.6%
Food and beverage	\$ 271.13	\$ 76.17	28.7%
Hotel food and beverage	\$ 93.92	\$ 26.39	9.9%
Other food and beverage	\$ 177.21	\$ 49.79	18.7%
Entertainment/recreation	\$ 29.51	\$ 8.29	3.1%
Tours and sightseeing	\$ 19.82	\$ 5.57	2.1%
Recreation	\$ 6.62	\$ 1.86	0.7%
Sporting events	\$ 3.07	\$ 0.86	0.3%
Retail	\$ 103.79	\$ 29.16	11.0%
Transportation	\$ 90.04	\$ 25.30	9.5%
Local transportation	\$ 29.96	\$ 8.42	3.2%
Auto rental	\$ 23.70	\$ 6.66	2.5%
Gas, tolls, parking	\$ 36.38	\$ 10.22	3.8%
Other	\$ 0.60	\$ 0.17	0.1%
Total	\$ 945.17	\$ 265.54	
Adjusted expenditure*	\$ 1,036.00	\$ 290.00	

* The original survey was conducted in 2003, and the adjusted expenditure is for year-end 2005 dollars.

Source: *Exact Convention Expenditure & Impact Study*

We apply the following, based on Exact guidelines:

- Exhibiting companies spend \$349.84 per delegate with local businesses. This includes such items as food and beverage, advertising in the host city, local transportation and local services. The adjusted amount spent per delegate per day is \$100.
- Event organizers spend \$95.70 per delegate on similar items, including overall food-and-beverage spending and renting exhibit space. The adjusted amount spent per delegate per day is \$24.

The following table incorporates a variety of assumptions designed to project a range of economic impacts related to meetings and conventions held on-site at a destination casino resort in Massachusetts. Note that these are averages, and the impacts would be significantly greater in Boston than they would be in smaller markets.

We are assuming a range of 70,000 to 100,000 square feet of space of meeting space in our initial model. We also assume 2,000 hotel rooms on-site. Note that some of the numbers, such as the room impact on other properties, are negative. This essentially means that some of the rooms needed to service these meetings would siphon demand from other properties. However, we add the caveat that this model does not take into account demand for rooms generated by meetings and conventions at BCEC, the Hynes center or any other facility. In our experience, a casino would sufficiently increase demand for larger conventions – and, at the very least, make a region more competitive in attracting such meetings.

For smaller markets, however, that would not be the case – since those markets do not compete for larger events. In such markets, a casino destination might very well compete against other area lodging facilities for room nights. However, that begs a related question: How many of these regional meetings would locate in such markets in the absence of a casino hotel? In other words, we can expect that a significant, unquantifiable portion of these meetings would likely go to other regions.

Still, any negative impact on area hotels in any scenario can be minimized, or eliminated, if casinos focus largely on their own gaming customers as hotel guests. This often occurs in many markets where casino guests prove to be much more valuable as overnight visitors than

cash-paying hotel guests would be. In effect, this would reduce the number of room nights made available to conventions and meetings.

	Scenario 1	Scenario 2	Scenario 3
Total Square Feet, meeting and exhibition space	70,000	80,000	100,000
Annual Sq. Ft. Availability	25,550,000	29,200,000	36,500,000
Utilization Percent	40%	30%	20%
Sq. Ft. Utilized	10,220,000	8,760,000	7,300,000
Sq. ft. per attendee	43.03	43.03	43.03
Projected Annual Conference Center Attendance	237,513	203,582	169,652
Percentage Adult Attendees	90%	90%	90%
Conference Center Adults, total days	213,762	183,224	152,687
Est. pct. of adults who would stay overnight	80%	60%	50%
Est. demand for room nights	171,009	109,934	76,343
Daily spending by overnight convention visitor	\$290.00	\$290.00	\$290.00
Total spending by overnight convention visitors, Massachusetts destination casino property	\$49,592,673	\$31,881,004	\$22,139,586
Spending by event organizers, per delegate per day	\$ 24.00	\$ 24.00	\$ 24.00
Spending by event organizers	\$5,130,276	\$4,397,380	\$3,664,483
Spending by exhibiting companies, per delegate per day	\$ 100.00	\$ 100.00	\$ 100.00
Pct. of events that include exhibiting companies	40%	30%	20%
Spending by exhibiting companies	\$8,550,461	\$5,496,725	\$3,053,736
Total convention/meeting spending	\$63,273,410	\$41,775,108	\$28,857,805
Pct. of spending outside Massachusetts destination casino property	60%	50%	40%
Dollars spent at other area businesses	\$37,964,046	\$20,887,554	\$11,543,122

Sensitivity analysis

This section of the report analyzes the impact on other area businesses based on changes in two key variables: the percentage of adults who would stay overnight, and the percentage of spending outside the casino destination:

Estimated Dollars spent at other area businesses: Scenario 1						
Pct. Of spending outside destination casino	Pct. Of adult attendees who stay overnight					
		60%	50%	40%	30%	20%
	60%	\$ 30,525,145	\$ 26,805,695	\$ 23,086,244	\$ 19,366,794	\$ 15,647,343
	55%	\$ 27,981,383	\$ 24,571,887	\$ 21,162,390	\$ 17,752,894	\$ 14,343,398
	50%	\$ 25,437,621	\$ 22,338,079	\$ 19,238,537	\$ 16,138,995	\$ 13,039,453
	45%	\$ 22,893,859	\$ 20,104,271	\$ 17,314,683	\$ 14,525,095	\$ 11,735,507
	40%	\$ 20,350,097	\$ 17,870,463	\$ 15,390,829	\$ 12,911,196	\$ 10,431,562
	35%	\$ 17,806,335	\$ 15,636,655	\$ 13,466,976	\$ 11,297,296	\$ 9,127,617
	30%	\$ 15,262,573	\$ 13,402,847	\$ 11,543,122	\$ 9,683,397	\$ 7,823,672
	25%	\$ 12,718,810	\$ 11,169,039	\$ 9,619,268	\$ 8,069,497	\$ 6,519,726

Estimated Dollars spent at other area businesses: Scenario 2						
Pct. Of spending outside destination casino	Pct. Of adult attendees who stay overnight					
		60%	50%	40%	30%	20%
	60%	\$ 25,065,065	\$ 21,876,965	\$ 18,688,864	\$ 15,500,764	\$ 12,312,664
	55%	\$ 22,976,310	\$ 20,053,884	\$ 17,131,459	\$ 14,209,034	\$ 11,286,608
	50%	\$ 20,887,554	\$ 18,230,804	\$ 15,574,054	\$ 12,917,303	\$ 10,260,553
	45%	\$ 18,798,799	\$ 16,407,724	\$ 14,016,648	\$ 11,625,573	\$ 9,234,498
	40%	\$ 16,710,043	\$ 14,584,643	\$ 12,459,243	\$ 10,333,843	\$ 8,208,442
	35%	\$ 14,621,288	\$ 12,761,563	\$ 10,901,838	\$ 9,042,112	\$ 7,182,387
	30%	\$ 12,532,533	\$ 10,938,482	\$ 9,344,432	\$ 7,750,382	\$ 6,156,332
	25%	\$ 10,443,777	\$ 9,115,402	\$ 7,787,027	\$ 6,458,652	\$ 5,130,276

Estimated Dollars spent at other area businesses: Scenario 3						
Pct. Of spending outside destination casino	Pct. Of adult attendees who stay overnight					
		60%	50%	40%	30%	20%
	60%	\$ 19,971,433	\$ 17,314,683	\$ 14,657,933	\$ 12,001,182	\$ 9,344,432
	55%	\$ 18,307,147	\$ 15,871,793	\$ 13,436,438	\$ 11,001,084	\$ 8,565,729
	50%	\$ 16,642,861	\$ 14,428,903	\$ 12,214,944	\$ 10,000,985	\$ 7,787,027
	45%	\$ 14,978,575	\$ 12,986,012	\$ 10,993,450	\$ 9,000,887	\$ 7,008,324
	40%	\$ 13,314,289	\$ 11,543,122	\$ 9,771,955	\$ 8,000,788	\$ 6,229,621
	35%	\$ 11,650,003	\$ 10,100,232	\$ 8,550,461	\$ 7,000,690	\$ 5,450,919
	30%	\$ 9,985,717	\$ 8,657,342	\$ 7,328,966	\$ 6,000,591	\$ 4,672,216
	25%	\$ 8,321,431	\$ 7,214,451	\$ 6,107,472	\$ 5,000,493	\$ 3,893,513

The sensitivity analysis indicates the following:

- In Scenario 1, every 10 percent increase in the number of adult attendees who stay overnight would generate between \$1.8 million and \$3.7 million in additional spending at other area businesses.
- In Scenario 2, every 10 percent increase in the number of adult attendees who stay overnight would generate between \$1.6 million and \$3.2 million in additional spending at other area businesses.
- In Scenario 3, every 10 percent increase in the number of adult attendees who stay overnight would generate between \$1.3 million and \$2.6 million in additional spending at other area businesses.
- In Scenario 1, every 5 percent increase in the percentage of spending outside the destination casino would generate between \$1.3 million and \$2.5 million in additional spending at other area businesses.
- In Scenario 2, every 5 percent increase in the percentage of spending outside the destination casino would generate between \$1.0 million and \$2.1 million in additional spending at other area businesses.
- In Scenario 3, every 5 percent increase in the percentage of spending outside the destination casino would generate between \$780,000 and \$1.6 million in additional spending at other area businesses.

The second part of our sensitivity analysis assumes the same number of hotel rooms, but adds significantly more convention and meeting space in all three scenarios.

Estimated dollars spent at other area businesses: Scenario 1						
Pct. Of spending outside destination casino	Square footage of meeting/convention space at destination casino					
	70,000	80,000	90,000	100,000	110,000	
	60%	\$ 37,964,046	\$ 43,387,481	\$ 48,810,916	\$ 54,234,351	\$ 59,657,786
	55%	\$ 34,800,375	\$ 39,771,858	\$ 44,743,340	\$ 49,714,822	\$ 54,686,304
	50%	\$ 31,636,705	\$ 36,156,234	\$ 40,675,764	\$ 45,195,293	\$ 49,714,822
	45%	\$ 28,473,034	\$ 32,540,611	\$ 36,608,187	\$ 40,675,764	\$ 44,743,340
	40%	\$ 25,309,364	\$ 28,924,987	\$ 32,540,611	\$ 36,156,234	\$ 39,771,858
	35%	\$ 22,145,693	\$ 25,309,364	\$ 28,473,034	\$ 31,636,705	\$ 34,800,375
	30%	\$ 18,982,023	\$ 21,693,741	\$ 24,405,458	\$ 27,117,176	\$ 29,828,893
	25%	\$ 15,818,352	\$ 18,078,117	\$ 20,337,882	\$ 22,597,646	\$ 24,857,411

Estimated dollars spent at other area businesses: Scenario 2						
Pct. Of spending outside destination casino	Square footage of meeting/convention space at destination casino					
	70,000	80,000	90,000	100,000	110,000	
	60%	\$ 21,931,932	\$ 25,065,065	\$ 28,198,198	\$ 31,331,331	\$ 34,464,464
	55%	\$ 20,104,271	\$ 22,976,310	\$ 25,848,348	\$ 28,720,387	\$ 31,592,426
	50%	\$ 18,276,610	\$ 20,887,554	\$ 23,498,499	\$ 26,109,443	\$ 28,720,387
	45%	\$ 16,448,949	\$ 18,798,799	\$ 21,148,649	\$ 23,498,499	\$ 25,848,348
	40%	\$ 14,621,288	\$ 16,710,043	\$ 18,798,799	\$ 20,887,554	\$ 22,976,310
	35%	\$ 12,793,627	\$ 14,621,288	\$ 16,448,949	\$ 18,276,610	\$ 20,104,271
	30%	\$ 10,965,966	\$ 12,532,533	\$ 14,099,099	\$ 15,665,666	\$ 17,232,232
	25%	\$ 9,138,305	\$ 10,443,777	\$ 11,749,249	\$ 13,054,721	\$ 14,360,194

Estimated dollars spent at other area businesses: Scenario 3						
Pct. Of spending outside destination casino	Square footage of meeting/convention space at destination casino					
	70,000	80,000	90,000	100,000	110,000	
	60%	\$ 12,120,278	\$ 13,851,746	\$ 15,583,215	\$ 17,314,683	\$ 19,046,151
	55%	\$ 11,110,255	\$ 12,697,434	\$ 14,284,614	\$ 15,871,793	\$ 17,458,972
	50%	\$ 10,100,232	\$ 11,543,122	\$ 12,986,012	\$ 14,428,903	\$ 15,871,793
	45%	\$ 9,090,209	\$ 10,388,810	\$ 11,687,411	\$ 12,986,012	\$ 14,284,614
	40%	\$ 8,080,185	\$ 9,234,498	\$ 10,388,810	\$ 11,543,122	\$ 12,697,434
	35%	\$ 7,070,162	\$ 8,080,185	\$ 9,090,209	\$ 10,100,232	\$ 11,110,255
	30%	\$ 6,060,139	\$ 6,925,873	\$ 7,791,607	\$ 8,657,342	\$ 9,523,076
	25%	\$ 5,050,116	\$ 5,771,561	\$ 6,493,006	\$ 7,214,451	\$ 7,935,896

- In Scenario 1, every 10,000 square foot increase in meeting/convention space would generate between \$2.2 million and \$5.4 million in additional spending at other area businesses.
- In Scenario 2, every 10,000 square foot increase in meeting/convention space would generate between \$1.3 million and \$3.1 million in additional spending at other area businesses.
- In Scenario 3, every 10,000 square foot increase in meeting/convention space would generate between \$721,000 and \$1.7 million in additional spending at other area businesses.

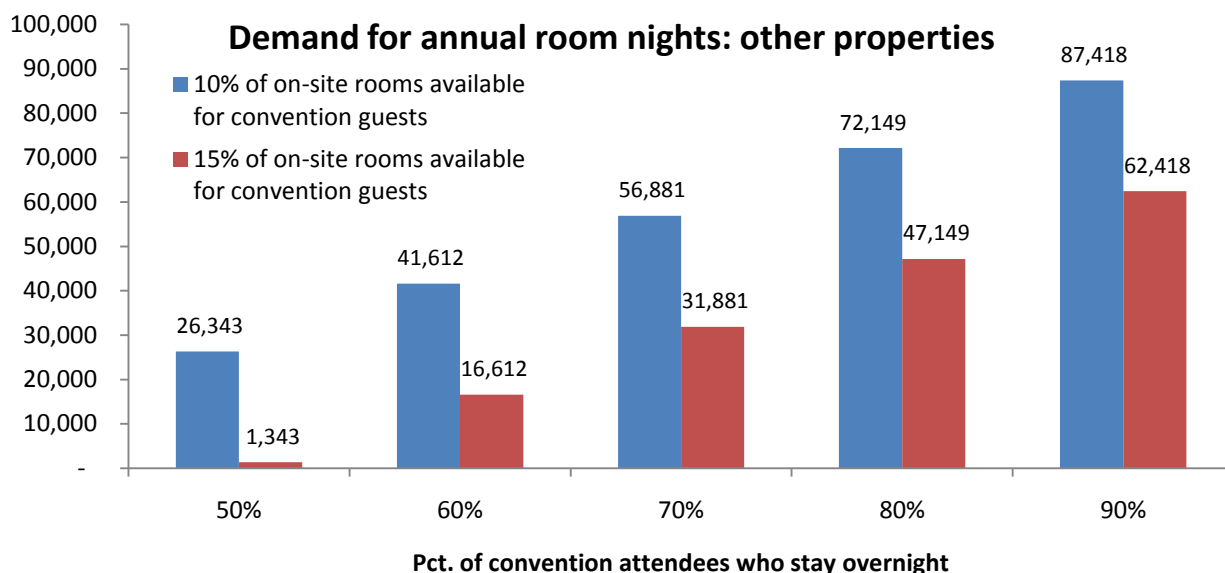
Our most conservative projections, as detailed in the above model, are that conventions and meetings at a destination casino would generate at least \$7.2 million in annual spending at other area businesses.

We believe this is realistic and practical, in large measure because a destination casino is going to limit the number of rooms on site that would be available to convention attendees. Bear in mind that convention attendees would have to be measured, in terms of profitability, against all other overnight visitors, including casino guests. It would be neither practical nor prudent to expect a casino operator to displace, or turn away a profitable casino guest to favor a less profitable convention attendee.

However, limiting the number of rooms available to convention attendees could actually advance public policy, assuming there is a sufficient level of quality lodging and other facilities in close proximity to the casino hotel.

For example, in our Scenario 3 above – which assumes 100,000 square feet of meeting space – the demand would be for 76,343 room nights for convention attendees. If a destination casino limits its availability to 250 nights a year (five mid-week nights times 50 weeks, roughly), and allocates 10 percent of its available 2,000 rooms to convention attendees, this would fill 50,000 room nights a year.

Assuming there are a sufficient number of qualified lodging facilities nearby, this would generate 26,343 room nights at other facilities – if half the convention attendees stay at least one night. The following chart shows differing levels of demand, assuming that the destination casino limits its available rooms to either 10 percent or 15 percent of its inventory:



Note the inverse relationship between the number of on-site rooms allocated to conventions and meetings and the potential demand for room nights at other properties.

Conventions and meetings: policy implications

The policy implications of this section of the analysis indicate that the Commonwealth has an interest in encouraging in-house convention and meeting space for casino destinations. This analysis makes it clear that conventions and meetings can complement gaming revenue and generate incremental revenue for the casino property as well as other area businesses.

Market forces and the potential returns on investment will dictate the overall quality and breadth of amenities that would be located on site for a destination casino. However, the bidding process should encourage a focus on conventions and meetings.

This analysis does not suggest that destination casinos would compete against established centers, such as the Boston Convention & Exhibition Center, the John B. Hynes Veterans Memorial Convention Center or the MassMutual Center. Indeed, we fully expect that gaming operators would seek to complement such facilities, where appropriate, if they are sited within reasonable proximity. As noted, the presence of casinos could help fund the marketing of such centers, and would help make such marketing efforts more effective, since the presence of casinos and their attendant amenities would prove to be attractive to more meeting planners.

Most convention and visitors bureaus (also known as “destination marketing organizations”), including the Greater Boston Convention & Visitors Bureau, rely on hotel taxes as a key means of funding their marketing efforts. In our experience, such marketing efforts, funded by overnight guests, become self-generating sources of revenue that allow the local DMO or CVB to market the destination to more potential visitors, who then stay overnight and provide more funding for future marketing efforts. Traditionally, such funding is set as a percentage of the average daily rate. Since casino hotels, however, operate under a different business model, in which many room nights are offered at reduced or complimentary rates, the legislation should consider establishing fixed dollar amounts that would equate to a similar amount.

Section III: Employment & Wage Analysis

Casino jobs forecast

The following represents an estimate of the number of total employees, by department, needed to operate a typical casino property with the following assumed level of amenities.

- 2,000-room hotel
- 3,000 slot machines
- 120 table games
- 60 poker tables
- Six restaurants
- Two bars
- One nightclub
- 20,000 square feet retail space
- Convention center
- Entertainment venue
- Pool and spa

This estimate is used as the basis for the economic impact analysis of salaries and wages. The number of gaming positions ranges higher than we used in our revenue estimate, which was conservatively based on population models. However, we assume that destination casinos in Massachusetts would use the hotel rooms, convention center and other amenities to pursue incremental revenue, as we noted earlier. This would likely allow a property to ultimately justify a higher number of gaming positions. More important, for purposes of planning an employee training program, the higher number should be used as the basis for identifying employee skill requirements, analyzing the local labor pool and recommending recruitment and training strategies.

<i>Department</i>	<i>Line Employees</i>	<i>Supervisors</i>	<i>Shift Managers and Dept Heads</i>	Total
Casino	1,201	267	22	1,490
Hotel	1,262	98	15	1,375
F&B	936	63	8	1,007
Marketing	206	24	5	235
Finance	96	67	7	170
Admin	80	10	3	93
Vice Presidents			7	7
Total	3,781	529	67	4,377

Department	Job	SOC Code¹²⁷	Estimated Full-time Equivalents
Casino	Slot Service Attendants	39-1012	70
Casino	Slot Technical	49-2097	24
Casino	Slot Supervisory	39-1021	15
Casino	Slot Shift Manager	11-9071	4
Casino	Exec Director Slot Operations	11-1021	1
Casino	Tables	39-3011	720
Casino	Tables Supervisory	39-1011	180
Casino	Table Games Shift Manager	11-9071	4
Casino	Executive Director Table Games	11-1021	1
Casino	Poker	39-3011	240
Casino	Poker Supervisory	39-1011	60
Casino	Poker Shift Manager	11-9071	3
Casino	Poker Director	11-1021	1
Casino	Casino Cashiering	39-3019	75
Casino	Casino Credit Clerks	39-3019	15
Casino	Pit Clerks	39-3019	21
Casino	Cashiering Supervisors	39-1011	5
Casino	Casino Cashiering Shift Manager	11-9071	3
Casino	Count Room	39-3019	16
Casino	Count Room Supervisory	39-1011	3
Casino	Director Casino Accounting	11-1021	1
Casino	Surveillance	33-9031	20
Casino	Surveillance Supv	39-1011	4
Casino	Surveillance Shift Manager	11-9071	3
Casino	Surveillance Director	11-1021	1
Hotel	Housekeepers	37-2012	359
Hotel	Housekeeping Supervisory	37-1011	20
Hotel	Public Areas	37-2011	200
Hotel	Public Areas Supervisory	37-1011	20
Hotel	Housekeeping/Public Areas Shift Managers	11-9081	4
Hotel	Director Housekeeping Public Areas	11-9081	1
Hotel	Director Hotel Operations	11-9081	1
Hotel	Front Desk	43-4081	57
Hotel	Front Desk Supervisory	39-1021	6
Hotel	Bell Services	39-6011	30
Hotel	Valet Attendant	53-6021	140
Hotel	Valet Cashier	41-2011	10
Hotel	Valet Supervisor	39-1021	6
Hotel	PBX Operator	43-2021	40
Hotel	PBX Supervisor	39-1021	6
Hotel	Message Therapists	29-1123	30
Hotel	Spa Attendant	39-9099	12
Hotel	Spa Manager	11-9111	1
Hotel	Spa Supervisor	39-1021	3
Hotel	Health Club Attendant	39-9032	12
Hotel	Health Club Supervisor	39-1021	3
Hotel	Pool Supervisor	33-1099	3
Hotel	Life Guard	33-9092	12
Hotel	Grounds Keeper	37-3011	30
Hotel	General Maintenance	47-2061	30
Hotel	Painter	47-2141	20
Hotel	Electrician	47-2111	20
Hotel	Carpenter	47-2031	20
Hotel	Plumber	47-2152	15
Hotel	HVAC	49-9021	10
Hotel	Facilities Supervisory	11-9021	4
Hotel	Facilities Shift Manager	11-9021	3
Hotel	Executive Director Facilities	11-9041	1
Hotel	Security	33-9032	160
Hotel	Security Supervisor	33-1099	20
Hotel	Security Shift Manager	11-9071	3

¹²⁷ SOC = Standard Occupational Code, a system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data.

Department	Job	SOC Code¹²⁷	Estimated Full-time Equivalents
Hotel	Executive Director Security	11-1021	1
Hotel	Convention Services	53-7062	25
Hotel	Retail Manager	11-9081	1
Hotel	Retail	41-2031	30
Hotel	Retail Supervisors	41-1011	6
F&B	Bartender	35-3011	56
F&B	Bar Porter	35-9011	19
F&B	Beverage Server	35-3041	150
F&B	Food Server	35-3031	140
F&B	Bus Person	35-9011	70
F&B	Greeter	35-9031	15
F&B	Stocker	35-0000	42
F&B	F&B Supervisor	35-1012	20
F&B	F&B Shift Managers	11-9051	4
F&B	Director Beverage	11-9199	1
F&B	Exec Director Food and Beverage	11-9021	1
F&B	Banquet Beverage	35-3011	50
F&B	Banquet Server	35-3031	61
F&B	Banquet Manager	35-1012	9
F&B	Director Catering/Convention Services	11-9199	1
F&B	Room Service Food Server	35-3041	40
F&B	Room Service Attendant	35-9011	21
F&B	Room Service Order Taker	41-2011	12
F&B	Cafeteria	35-9011	20
F&B	Uniforms Attendant	43-5071	12
F&B	Room Service Supervisor	35-1012	6
F&B	Butler	35-3031	5
F&B	Director Room Service	11-9199	1
F&B	Cooks	35-2014	82
F&B	Sous Chef	35-1011	12
F&B	Stewards	35-9021	140
F&B	Steward Supervisor	35-1012	14
F&B	Executive Chef	11-9051	2
Marketing	Box Office Supervisor	39-1021	3
Marketing	Box Office	41-2031	12
Marketing	Entertainment **	27-4011	40
Marketing	Stage Managers	27-2012	3
Marketing	Promotions Booth	41-9041	35
Marketing	Promotions Supervisor	39-1021	8
Marketing	Telemarketing/Reservations	41-9041	95
Marketing	Bus Greeter	41-9041	12
Marketing	Hosts	41-9099	12
Marketing	Player Development Execs	11-2022	10
Marketing	Executive Director Player Development	11-2022	1
Marketing	Director Advertising	11-2021	1
Marketing	Director Public Relations	11-2031	1
Marketing	Director Database Marketing	11-2021	1
Marketing	Director Marketing Operations	11-2021	1
Accounting	Hotel/F&B Cashier	41-2011	34
Accounting	Accountants	13-2011	10
Accounting	Accounting Clerks	43-3031	30
Accounting	Casino Accounting	43-3031	20
Accounting	Casino Controller	11-3031	1
Accounting	Director Financial Analysis	11-3031	1
Accounting	Director Financial Reporting	11-3031	1
Accounting	Controller	11-3031	1
Accounting	Director Hotel Accounting	11-3031	1
Accounting	Purchasing Manager	11-3061	1
Accounting	Purchasing Agent	43-3061	10
Accounting	Warehouse Supervisor	43-1011	6
Accounting	Warehouse Attendant	43-5071	20
Accounting	Director IT	11-3021	1
Accounting	Information Technology Techs and Programmers	15-1041	15
Accounting	Computer Operator	43-9011	12
Accounting	Internal Audit	13-2011	5

Department	Job	SOC Code¹²⁷	Estimated Full-time Equivalents
Accounting	Executive Director Internal Audit	11-3031	1
Admin	Human Resources Supervisors/Professionals	13-1071	10
Admin	Executive Director Human Resources	11-3049	1
Admin	Director Employee Relations	11-3041	1
Admin	Director Personnel	11-3042	1
Admin	Human Resources Administrative	43-4161	20
Admin	Executive Directors	11-3011	0
Admin	Administrative Professionals	43-6014	60
Admin	Vice Presidents	11-1011	7
Total Jobs			4.377

Reasoning and assumptions on number of positions

The number of positions was estimated based on reviewing casinos and proposed casinos in New Jersey, Kansas, Louisiana, Indiana and Florida. Where applicable, the number of employees was based on a ratio of employees to units. The ratios were determined by taking an average of multiple casinos where possible.

Table games

We calculated the number of table games employees after reviewing the average number of dealers per table, and the average supervisor/dealer ratio of all of the Atlantic City casinos as reported in the most recent Atlantic City Benchmark Survey¹²⁸. Four dealers per table and one supervisor for every four dealers is the current average in Atlantic City. Borgata uses seven dealers per table, which is in part a reflection of busier tables. To keep our estimate realistic but conservative we used six dealers per table which is higher than the city wide average but still not as high as Borgata's current ratio.

Slots

We have reduced the number of slot attendants below traditional models based on a review of current industry data. It is clear that the number of slot attendant positions needed has been significantly reduced by technology. Atlantic City casinos have been operating with significantly fewer slot attendants since they have become coinless. The current average number of slot machines in Atlantic City per slot attendant FTE is 56, while the Borgata uses 30. It is expected that the volume of business in the Massachusetts Casinos will be similar to the Borgata. To keep our estimate realistic but conservative, we used the midpoint between the Borgata average and the overall Atlantic City average.

The number of slot technicians in the forecast is also proportionate to the number of slot machines. Technology improvements, which could reduce the need for staff in this position are not expected until after server-based slots are fully developed and implemented. Borgata averages 91 slot machines per slot technician while Atlantic City averages 160 overall. For purposes of this study, to keep our estimate realistic but conservative, we again used the midpoint between Borgata and Atlantic City overall average which is 126 slot machines for each technician.

¹²⁸ Compensation managers within Atlantic City casino hotels annually share salary ranges for about 100 key positions.

Poker

We projected the number of poker dealers by reviewing the average number of dealers per table at three prominent Atlantic City poker rooms of varying size. The average of the three casinos reviewed was three dealers per poker table. The house with the highest average of the group was 4.3 which was the Tropicana a casino with significantly less revenue than Borgata. Again to keep our estimate realistic but conservative, we used an average of four dealers per poker table. Typical casinos average one supervisor for every four dealers which is the ration used in this forecast.

Guest room attendant

We estimated the ratio of employees per hotel room by reviewing the number of employees and the number of hotel rooms at two prominent casino hotels in Atlantic City – Borgata (high end) and Tropicana (mid-market). Borgata averages 5.57 hotel rooms per guest room attendant and the Tropicana averages 6.83.

The number of housekeeping positions needed will vary depending upon the mix of suites and standard rooms. Typically a larger, more upscale room or a suite will take longer to clean, thus increasing the number of required housekeepers. For example, in Atlantic City, guest room attendants are required to clean the equivalent of 14 rooms per shift based on the UNITE HERE union contract. If they are assigned larger rooms or suites then they are given “extra credits” for those assigned rooms. One credit is equivalent to one-half hour of work for a guest room attendant. For example, Borgata assigns the following credits to its suites and larger rooms:

- Standard room = 1 credit
- Fiore suites = 2 credits
- Opus suites = 2 credits
- Studio = 2 credits
- Piatto = 4 credits
- Quad = 7 credits

Fiore suites are given two credits even though they only contain one physical room because they are larger in square footage, and contain additional items such as a sofa and separate bath. Opus suites are made up of two separate rooms, a living room and a bedroom, and also includes an upscale bathroom design including separate bath tub and shower.

The Ritz Carlton Hotel in Philadelphia uses a similar methodology for the assignment of Housekeeping attendants.¹²⁹ Each housekeeper is assigned 14 credits per day. Standard rooms are worth one credit, suites two credits, and Penthouse suites six credits.

We assumed for the purposes of this study that the casino hotels in Massachusetts will be similar to Borgata and thus have used a ratio of one housekeeper for every 5.57 rooms.

¹²⁹ Interview with former Hotel Supervisor, Ritz Carlton Hotel Philadelphia

Security

We projected the number of security guards by comparing the number of security guards at similar sized properties to the ones in the forecast.

Pit clerks/casino cashiers

We projected the number of pit clerks by reviewing the average number of table games per employee in all of the Atlantic City casinos. The ratio used for this study was one pit clerk for every 5.6 tables. This number is the midpoint between the Borgata Average of 4.5 tables per pit clerk and the Atlantic City average of 6.65 tables per pit clerk.

The average number of cashiers in Atlantic City is one cashier for every 2.75 table games. This number varies drastically between the various casinos, however, and does not appear to be directly proportional to the number of table games. It is also a function of the number of slot machines as well as the volume of business on the casino floor. For purposes of this study, we estimated that 75 cashiers would be sufficient based on comparing properties with a similar mix of slots and tables.

Convention center/entertainment venue

We consulted two sources in forecasting the number of entertainment and convention services employees needed to staff the proposed convention facility: a former assistant vice president of entertainment for a prominent casino in Atlantic City and the current general manager of the Atlantic City Convention Center and Boardwalk Hall.¹³⁰ Both executives reported that to avoid excess staff between major events, a small full-time staff is retained and a large number of casual employees are hired from the union hall to cover major events. The diverse mix of technically skilled employees is needed on the full-time staff to ensure that casuals can be adequately trained in the use of the convention and entertainment equipment in the facility. Additionally, a larger full time staff can be cost justified if the facility is booked frequently.

We based the forecast in this study on the comment of the two individuals then checked for reasonableness by reviewing the staffing at a casino in Atlantic City that has a large convention facility and showroom, with conventions as a significant part of their marketing plan.

Food and beverage positions

We forecast food and beverage positions based on the number of anticipated restaurant seats in the proposed casinos. Certain positions would fluctuate in direct proportion to the number of restaurant seats. For those positions, we used a model that assumes 85 percent utilization and 3.2 turns per day for each restaurant seat. The following ratios were used in the forecast:

Position	Seats per FTE
Food server	10
Bus person	20
Stocker	33
Cooks	17

¹³⁰ Atlantic City Convention Hall has almost 500,000 square feet of convention space and Boardwalk hall has 268,000 square feet, ACCVA Website, http://www.atlanticcitynj.com/meeting_ACCC.asp

Position	Seats per FTE
Stewards	10
Bartender	25
Bar porter	75

We anticipate that the six restaurants, two bars and one nightclub will create approximately 1,400 food and beverage seats at each property.

We forecast the room service positions based on a typical ratio of number of rooms per employee as used in a mid range casino hotel in Atlantic City. We used a ratio of one room service food server for every 50 rooms, along with one room service attendant for every 95 rooms.

All other positions

We based all other projections for number of positions on a review of the most recent Atlantic City Benchmark survey from 2007 as well as a review of existing and proposed casinos in Kansas, Louisiana, Indiana and Florida.

Methodology cross-check: revenue, employment

In this section of the report, we are cross-checking our employment model with the revenue projections that were developed to ensure that they are essentially compatible. We want to make certain that the level of employment we have projected is appropriate to staff destination resorts that would generate the range of revenue we have projected.

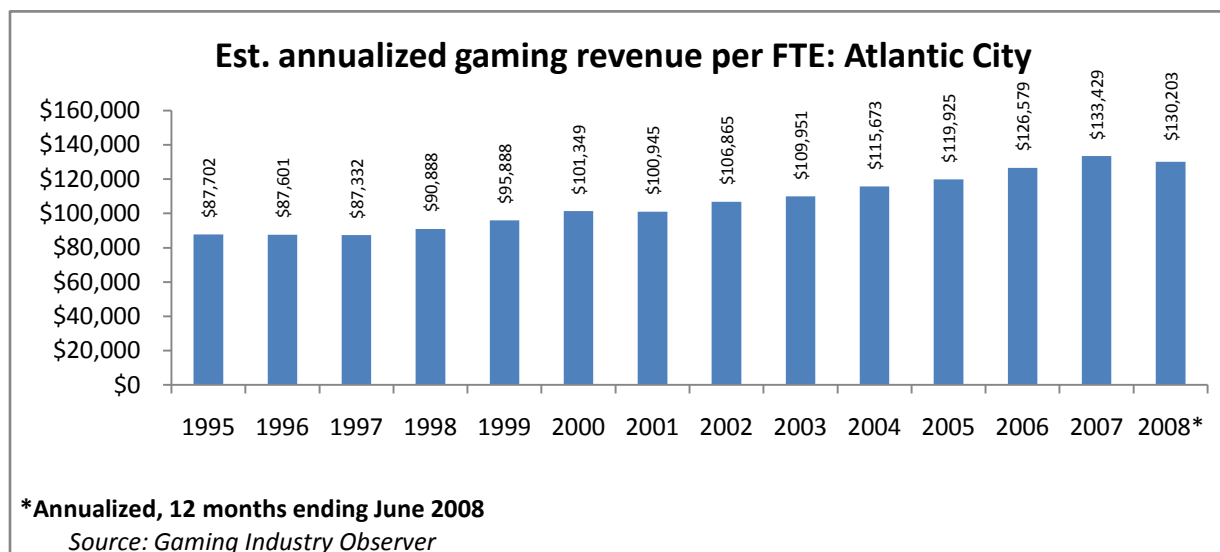
To do this, we rely on the Atlantic City model because of the availability of data, and because the destinations in Atlantic City are roughly comparable to what has been contemplated in this legislation. The following table lists the most recent public data for employment levels in Atlantic City casinos:

	Full-time	Part-time	Other*
Atlantic City Hilton	2,104	262	257
Bally's	4,259	252	550
Borgata	6,558	689	605
Caesars	3,131	333	529
Harrah's	3,373	253	481
Resorts	2,063	237	306
Showboat	2,302	149	498
Tropicana	2,988	424	250
Trump Marina	1,718	263	249
Trump Plaza	2,056	176	535
Trump Taj Mahal	<u>3,368</u>	<u>523</u>	<u>320</u>
Total	33,920	3,561	4,580

*Seasonal, temporary employees. Source: New Jersey Casino Control Commission

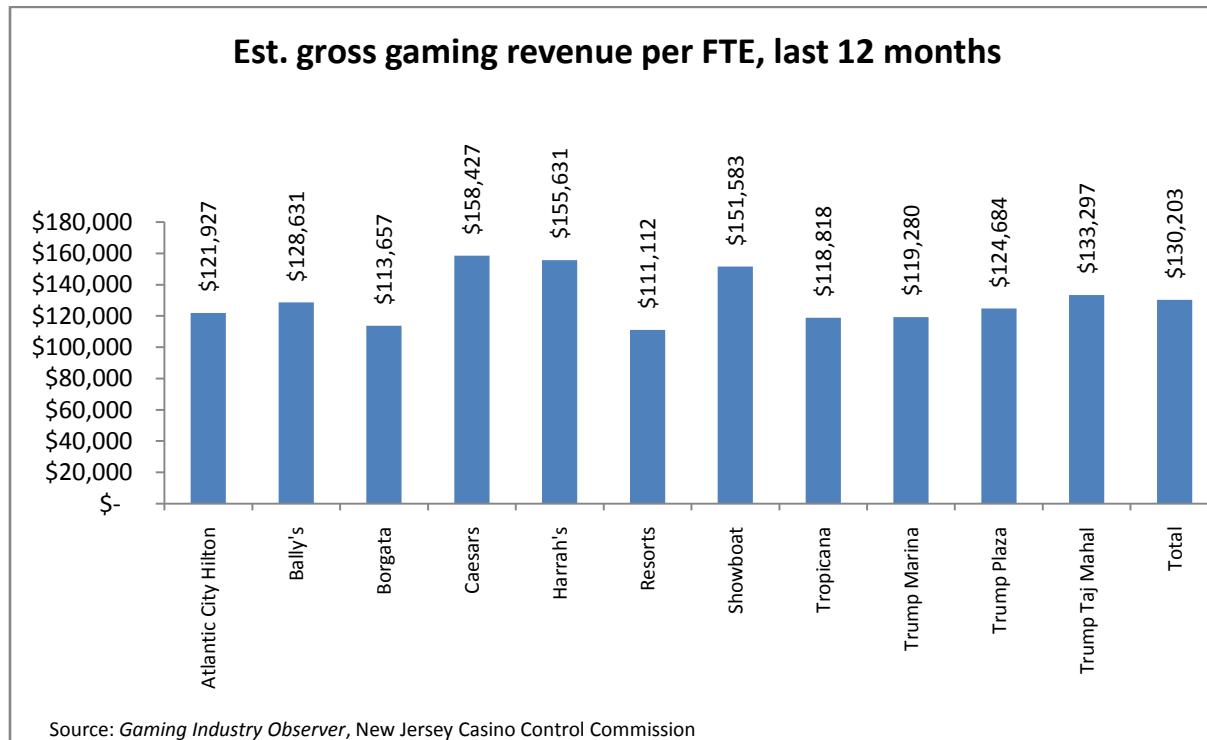
For more than a dozen years, we have been estimating gross gaming revenue per full-time equivalent employee in Atlantic City, based on a proprietary formula we developed in our publication, *Gaming Industry Observer*, that considers each part-time employee to be the

equivalent of 0.5 FTEs, while other employees are considered to be 0.33 FTEs. The following chart shows the range of estimated gross gaming revenue per FTE for the industry in Atlantic City.



The general increase in revenue per FTE over time can be attributed to a variety of reasons, from improvements in technology to consolidation within the industry.

For the last 12 months, the range of estimated revenue per FTE, by property, is detailed as follows:



Our moderate scenario projection of \$1.5 billion would generate a ratio of \$114,355 per FTE, at the low end of the range in the chart above. Our high-case would have generated \$135,290 per FTE, slightly higher than the average here. Based on this, we believe our employment estimates are reasonable.

Construction jobs forecast

The Massachusetts casinos as proposed would create approximately 3,000 direct construction jobs – that is, the total number of people who would have a direct casino-construction job for any length of time – for each of the three casinos. This was calculated by applying a methodology¹³¹ suggested by Sam Sabin, a senior vice president of Perini Building Company, a major construction firm based in Framingham, MA. Perini has extensive experience in constructing destination casino resorts, including the current \$9.2 billion MGM Mirage CityCenter in Las Vegas, the MGM Grand at Foxwoods, and several major projects on the Las Vegas Strip.

We compared the result of Sabin’s methodology against the actual experience at Borgata Hotel, Casino & Spa, a 2,000-hotel-room destination gaming resort constructed in Atlantic City from 2000-03. Borgata is approximately the same size as each of the three casino resorts envisioned for Massachusetts. Construction at Borgata resulted in 3,000 direct jobs, according to Tom Ballance, Borgata’s senior vice president of development. (The number of construction jobs at Borgata at any one point during the three-year building period peaked at 2,000.)

Ballance further estimated that it would cost 1.5 times more to construct Borgata today than it did in 2000-03; Borgata’s actual construction cost then was roughly \$650 million, which at today’s prices would cost \$975 million. We have thus assumed \$1 billion each in actual construction costs for the Massachusetts casinos.

We are aware of other formulas that may project a higher number of direct construction jobs, but in keeping with our policy of being conservative for this report, and respecting Perini’s local knowledge and extensive experience building large-scale casino resorts, we will assume 3,000 construction jobs per casino.

The following table lists the estimated compensation levels for various construction jobs in the Boston area:

¹³¹ Sabin suggested that the best way to estimate number of construction employees is to calculate payroll, typically between 25 percent and 35 percent of actual construction costs; we used a factor of 30 percent. Assuming \$1 billion of hard construction costs, we estimate total payroll for the project to be \$300,000,000, or \$100,000,000 per year for a 36-month construction period. Sabin estimates that a reasonable, blended, “all-in” hourly rate for construction employees in Massachusetts is \$65 per hour. This includes the average wage rates plus benefits, FICA tax, union fees, etc. Using these assumptions, the total number of employees per year is calculated by dividing \$100,000,000 by 52 weeks per year, by 40 hours per week, and by \$65 per hour. This results in 740 full-time-equivalent (FTE) positions per year. Sabin estimates average time on the job for construction workers is 9 months. Thus over 3 years, 2,960 people would be employed, which virtually matches the 3,000 actual jobs created during constructing of Borgata Hotel, Casino & Spa in Atlantic City. For this study, we assume 3,000 direct construction jobs per casino.

(SOC code)	Occupation	Employment	Hourly mean wage	Annual mean wage	Total Wages
47-0000	Construction and Extraction Occupations	84,630	\$24.60	\$51,160	\$4,329,670,800
47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	7,440	\$33.04	\$68,720	\$511,276,800
47-2022	Stonemasons	450	\$24.70	\$51,370	\$23,116,500
47-2031	Carpenters	14,690	\$24.25	\$50,440	\$740,963,600
47-2044	Tile and Marble Setters	410	\$26.14	\$54,370	\$22,291,700
47-2051	Cement Masons and Concrete Finishers	1,240	\$22.77	\$47,370	\$58,738,800
47-2061	Construction Laborers	10,980	\$20.72	\$43,090	\$473,128,200
47-2071	Paving, Surfacing, and Tamping Equipment Operators	750	\$19.70	\$40,980	\$30,735,000
47-2072	Pile-Driver Operators	230	\$30.65	\$63,760	\$14,664,800
47-2073	Operating Engineers and Other Construction Equipment Operators	3,610	\$26.66	\$55,460	\$200,210,600
47-2081	Drywall and Ceiling Tile Installers	660	\$23.26	\$48,380	\$31,930,800
47-2111	Electricians	10,370	\$26.90	\$55,950	\$580,201,500
47-2121	Glaziers	740	\$19.69	\$40,960	\$30,310,400
47-2131	Insulation Workers, Floor, Ceiling, and Wall	900	\$17.32	\$36,020	\$32,418,000
47-2141	Painters, Construction and Maintenance	3,360	\$20.82	\$43,300	\$145,488,000
47-2151	Pipelayers	330	\$23.71	\$49,310	\$16,272,300
47-2152	Plumbers, Pipefitters, and Steamfitters	8,060	\$27.53	\$57,260	\$461,515,600
47-2211	Sheet Metal Workers	3,490	\$23.32	\$48,500	\$169,265,000
47-2221	Structural Iron and Steel Workers	790	\$28.84	\$59,990	\$47,392,100
47-3011	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	960	\$20.90	\$43,480	\$41,740,800
47-3012	Helpers--Carpenters	670	\$15.88	\$33,030	\$22,130,100
47-3013	Helpers--Electricians	1,580	\$14.96	\$31,120	\$49,169,600
47-3014	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	160	\$10.77	\$22,390	\$3,582,400
47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	580	\$13.43	\$27,940	\$16,205,200
47-3016	Helpers--Roofers	240	\$15.88	\$33,040	\$7,929,600
47-3019	Helpers, Construction Trades, All Other	350	\$12.89	\$26,820	\$9,387,000
47-4011	Construction and Building Inspectors	1,790	\$22.98	\$47,790	\$85,544,100
47-4021	Elevator Installers and Repairers	600	\$34.20	\$71,130	\$42,678,000
47-4031	Fence Erectors	390	\$15.93	\$33,130	\$12,920,700
47-4041	Hazardous Materials Removal Workers	930	\$17.46	\$36,310	\$33,768,300
47-4051	Highway Maintenance Workers	1,650	\$18.70	\$38,900	\$64,185,000
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	440	\$16.90	\$35,150	\$15,466,000
47-5021	Earth Drillers, Except Oil and Gas	260	\$19.00	\$39,520	\$10,275,200
47-5081	Helpers--Extraction Workers	90	\$12.65	\$26,310	\$2,367,900

(SOC code)	Occupation	Employment	Hourly mean wage	Annual mean wage	Total Wages
	Total	79,190			\$4,007,269,600
	Average		\$21.29	\$44,282	
	Weighted Average		\$24.33	\$50,603	

If we assume average annual compensation of \$50,603 for construction employment, and 740 full-time equivalents (FTEs) per year, this will result in total annual construction payroll of \$37,446,220 for each of the three casinos. With that in mind, and assuming a 36 month construction period, we estimate total direct construction wages for the state of Massachusetts to be more than \$337 million.

Casino wage analysis

This section of the analysis details our estimates for the total compensation for the projected number of FTE positions that would be required to operate each of the three casinos in Massachusetts. It is expected that the casino located in the Boston area will have slightly higher salaries and wages than the casinos located in the southeastern and western sections of Massachusetts. The mean hourly rates were higher for the Boston MSA than for the state of Massachusetts for most positions listed on the Bureau of Labor Statistics website. See below for a detailed breakdown by position for each area. Salary and wage information for Casino positions was obtained from the National Section of the Bureau of Labor Statistics website.

			Boston MSA			State of Massachusetts		
Position	SOC Code	Est. FTEs	Mean Hourly Rate	Annual Rate	Total Compensation	Mean Hourly Rate	Annual Rate	Total Compensation
Slot Service Attendants	39-1012	70	\$12.16	\$25,293	\$1,770,510	\$12.16	\$25,293	\$1,770,510
Slot Technical	49-2097	24	\$17.26	\$35,901	\$861,624	\$17.26	\$35,901	\$861,624
Slot Supervisory	39-1021	15	\$17.35	\$36,088	\$541,320	\$17.35	\$36,088	\$541,320
Slot Shift Manager	11-9071	4	\$32.28	\$67,142	\$268,570	\$32.28	\$67,142	\$268,570
Exec Director Slot Operations	11-1021	1	\$53.42	\$111,114	\$111,114	\$53.42	\$111,114	\$111,114
Dealers	39-3011	720	\$8.18	\$17,014	\$12,250,368	\$8.18	\$17,014	\$12,250,368
Tables Supervisory	39-1011	180	\$20.38	\$42,390	\$7,630,272	\$20.38	\$42,390	\$7,630,272
Table Games Shift Manager	11-9071	4	\$32.28	\$67,142	\$268,570	\$32.28	\$67,142	\$268,570
Executive Director Table Games	11-1021	1	\$53.42	\$111,114	\$111,114	\$53.42	\$111,114	\$111,114
Poker Dealers	39-3011	240	\$8.18	\$17,014	\$4,083,456	\$8.18	\$17,014	\$4,083,456
Poker Supervisory	39-1011	60	\$20.38	\$42,390	\$2,543,424	\$20.38	\$42,390	\$2,543,424
Poker Shift Manager	11-	3	\$32.28	\$67,142	\$201,427	\$32.28	\$67,142	\$201,427

			Boston MSA			State of Massachusetts		
Position	SOC Code	Est. FTEs	Mean Hourly Rate	Annual Rate	Total Compensation	Mean Hourly Rate	Annual Rate	Total Compensation
	9071							
Poker Director	11-1021	1	\$53.42	\$111,114	\$111,114	\$53.42	\$111,114	\$111,114
Casino Cashiering	39-3019	75	\$11.59	\$24,107	\$1,808,040	\$11.59	\$24,107	\$1,808,040
Casino Credit Clerks	39-3019	15	\$11.59	\$24,107	\$361,608	\$11.59	\$24,107	\$361,608
Pit Clerks	39-3019	21	\$11.59	\$24,107	\$506,247	\$11.59	\$24,107	\$506,247
Cashiering Supervisors	39-1011	5	\$20.38	\$42,390	\$211,952	\$20.38	\$42,390	\$211,952
Casino Cashiering Shift Manager	11-9071	3	\$32.28	\$67,142	\$201,427	\$32.28	\$67,142	\$201,427
Count Room	39-3019	16	\$11.59	\$24,107	\$390,084	\$11.59	\$24,107	\$390,084
Count Room Supervisory	39-1011	3	\$20.38	\$42,390	\$127,171	\$20.38	\$42,390	\$127,171
Director Casino Accounting	11-1021	1	\$53.42	\$111,114	\$111,114	\$53.42	\$111,114	\$111,114
Surveillance	33-9031	20	\$14.65	\$30,472	\$609,440	\$14.65	\$30,472	\$609,440
Surveillance Supv	39-1011	4	\$20.38	\$42,390	\$169,562	\$20.38	\$42,390	\$169,562
Surveillance Shift Manager	11-9071	3	\$32.28	\$67,142	\$201,427	\$32.28	\$67,142	\$201,427
Surveillance Director	11-1021	1	\$53.42	\$111,114	\$111,114	\$53.42	\$111,114	\$111,114
Housekeepers	37-2012	359	\$10.82	\$22,506	\$8,081,005	\$10.62	\$22,090	\$7,931,634
Housekeeping Supervisory	37-1011	20	\$19.09	\$39,707	\$794,144	\$19.05	\$39,624	\$792,480
Public Areas	37-2011	200	\$12.57	\$26,146	\$5,229,120	\$12.47	\$25,938	\$5,187,520
Public Areas Supervisory	37-1011	20	\$19.09	\$39,707	\$794,144	\$19.05	\$39,624	\$792,480
Housekeeping/Public Areas Shift Managers	11-9081	4	\$27.38	\$56,950	\$227,802	\$24.97	\$51,938	\$207,750
Director Housekeeping Public Areas	11-9081	1	\$27.38	\$56,950	\$56,950	\$24.97	\$51,938	\$51,938
Director Hotel Operations	11-9081	1	\$27.38	\$56,950	\$56,950	\$24.97	\$51,938	\$51,938
Front Desk	43-4081	57	\$11.60	\$24,128	\$1,378,743	\$11.42	\$23,754	\$1,357,349
Front Desk Supervisory	39-1021	6	\$19.74	\$41,059	\$246,355	\$18.96	\$39,437	\$236,621
Bell Services	39-6011	30	\$11.39	\$23,691	\$710,736	\$11.78	\$24,502	\$735,072
Valet Attendant	53-6021	140	\$10.19	\$21,195	\$2,967,328	\$10.33	\$21,486	\$3,008,096
Valet Cashier	41-2011	10	\$9.38	\$19,510	\$195,104	\$9.39	\$19,531	\$195,312
Valet Supervisor	39-1021	6	\$19.74	\$41,059	\$246,355	\$18.96	\$39,437	\$236,621
PBX Operator	43-2021	40	\$13.07	\$27,186	\$1,087,424	\$12.38	\$25,750	\$1,030,016
PBX Supervisor	39-1021	6	\$19.74	\$41,059	\$246,355	\$18.96	\$39,437	\$236,621

			Boston MSA			State of Massachusetts		
Position	SOC Code	Est. FTEs	Mean Hourly Rate	Annual Rate	Total Compensation	Mean Hourly Rate	Annual Rate	Total Compensation
Message Therapists	29-1123	30	\$31.49	\$65,499	\$1,964,976	\$31.26	\$65,021	\$1,950,624
Spa Attendant	39-9099	12	\$12.41	\$25,813	\$309,754	\$12.43	\$25,854	\$310,253
Spa Manager	11-9111	1	\$46.52	\$96,762	\$96,762	\$45.14	\$93,891	\$93,891
Spa Supervisor	39-1021	3	\$19.74	\$41,059	\$123,178	\$18.96	\$39,437	\$118,310
Health Club Attendant	39-9032	12	\$12.46	\$25,917	\$311,002	\$12.08	\$25,126	\$301,517
Health Club Supervisor	39-1021	3	\$19.74	\$41,059	\$123,178	\$18.96	\$39,437	\$118,310
Pool Supervisor	33-1099	3	\$23.43	\$48,734	\$146,203	\$22.70	\$47,216	\$141,648
Life Guard	33-9092	12	\$11.10	\$23,088	\$277,056	\$10.85	\$22,568	\$270,816
Grounds Keeper	37-3011	30	\$14.19	\$29,515	\$885,456	\$14.01	\$29,141	\$874,224
General Maintenance	47-2061	30	\$20.72	\$43,098	\$1,292,928	\$20.00	\$41,600	\$1,248,000
Painter	47-2141	20	\$20.82	\$43,306	\$866,112	\$20.05	\$41,704	\$834,080
Electrician	47-2111	20	\$26.90	\$55,952	\$1,119,040	\$26.18	\$54,454	\$1,089,088
Carpenter	47-2031	20	\$24.25	\$50,440	\$1,008,800	\$23.64	\$49,171	\$983,424
Plumber	47-2152	15	\$27.53	\$57,262	\$858,936	\$26.50	\$55,120	\$826,800
HVAC	49-9021	10	\$23.48	\$48,838	\$488,384	\$23.53	\$48,942	\$489,424
Facilities Supervisory	11-9021	4	\$48.26	\$100,381	\$401,523	\$46.39	\$96,491	\$385,965
Facilities Shift Manager	11-9021	3	\$48.26	\$100,381	\$301,142	\$46.39	\$96,491	\$289,474
Executive Director Facilities	11-9041	1	\$60.64	\$126,131	\$126,131	\$58.56	\$121,805	\$121,805
Security	33-9032	160	\$12.24	\$25,459	\$4,073,472	\$12.10	\$25,168	\$4,026,880
Security Supervisor	33-1099	20	\$23.43	\$48,734	\$974,688	\$22.70	\$47,216	\$944,320
Security Shift Manager	11-9071	3	\$32.28	\$67,142	\$201,427	\$32.28	\$67,142	\$201,427
Executive Director Security	11-1021	1	\$53.42	\$111,114	\$111,114	\$51.36	\$106,829	\$106,829
Convention Services	53-7062	25	\$12.99	\$27,019	\$675,480	\$12.61	\$26,229	\$655,720
Retail Manager	11-9081	1	\$27.38	\$56,950	\$56,950	\$24.97	\$51,938	\$51,938
Retail	41-2031	30	\$12.14	\$25,251	\$757,536	\$12.04	\$25,043	\$751,296
Retail Supervisors	41-1011	6	\$19.84	\$41,267	\$247,603	\$19.79	\$41,163	\$246,979
Bartender	35-3011	56	\$11.32	\$23,546	\$1,318,554	\$11.08	\$23,046	\$1,290,598
Bar Porter	35-9011	19	\$10.05	\$20,904	\$390,208	\$9.96	\$20,717	\$386,714
Beverage Server	35-3041	150	\$10.72	\$22,298	\$3,344,640	\$10.50	\$21,840	\$3,276,000

			Boston MSA			State of Massachusetts		
Position	SOC Code	Est. FTEs	Mean Hourly Rate	Annual Rate	Total Compensation	Mean Hourly Rate	Annual Rate	Total Compensation
Food Server	35-3031	140	\$11.01	\$22,901	\$3,206,112	\$11.04	\$22,963	\$3,214,848
Bus Person	35-9011	70	\$10.05	\$20,904	\$1,463,280	\$9.96	\$20,717	\$1,450,176
Greeter	35-9031	15	\$9.77	\$20,322	\$304,824	\$9.78	\$20,342	\$305,136
Stocker	35-0000	42	\$10.78	\$22,422	\$951,253	\$10.75	\$22,360	\$948,606
F&B Supervisor	35-1012	20	\$15.98	\$33,238	\$664,768	\$15.85	\$32,968	\$659,360
F&B Shift Managers	11-9051	4	\$24.67	\$51,314	\$205,254	\$23.63	\$49,150	\$196,602
Director Beverage	11-9199	1	\$46.42	\$96,554	\$96,554	\$44.12	\$91,770	\$91,770
Exec Director Food and Beverage	11-9021	1	\$53.24	\$110,739	\$110,739	\$46.39	\$96,491	\$96,491
Banquet Beverage	35-3011	50	\$11.32	\$23,546	\$1,177,280	\$11.08	\$23,046	\$1,152,320
Banquet Server	35-3031	61	\$10.72	\$22,298	\$1,360,154	\$11.04	\$22,963	\$1,400,755
Banquet Manager	35-1012	9	\$15.98	\$33,238	\$299,146	\$15.85	\$32,968	\$296,712
Director Catering/Convention Services	11-9199	1	\$46.42	\$96,554	\$96,554	\$44.12	\$91,770	\$91,770
Room Service Food Server	35-3041	40	\$10.72	\$22,298	\$891,904	\$10.50	\$21,840	\$873,600
Room Service Attendant	35-9011	21	\$10.05	\$20,904	\$440,084	\$9.96	\$20,717	\$436,143
Room Service Order Taker	41-2011	12	\$9.38	\$19,510	\$234,125	\$9.39	\$19,531	\$234,374
Cafeteria	35-9011	20	\$10.05	\$20,904	\$418,080	\$9.96	\$20,717	\$414,336
Uniforms Attendant	43-5071	12	\$15.23	\$31,678	\$380,141	\$14.81	\$30,805	\$369,658
Room Service Supervisor	35-1012	6	\$15.98	\$33,238	\$199,430	\$15.85	\$32,968	\$197,808
Butler	35-3031	5	\$11.01	\$22,901	\$114,504	\$11.04	\$22,963	\$114,816
Director Room Service	11-9199	1	\$46.42	\$96,554	\$96,554	\$44.12	\$91,770	\$91,770
Cooks	35-2014	82	\$12.43	\$25,854	\$2,129,186	\$12.39	\$25,771	\$2,122,334
Sous Chef	35-1011	12	\$20.71	\$43,077	\$516,922	\$20.42	\$42,474	\$509,683
Stewards	35-9021	140	\$8.95	\$18,616	\$2,606,240	\$8.95	\$18,616	\$2,606,240
Steward Supervisor	35-1012	14	\$15.98	\$33,238	\$465,338	\$15.85	\$32,968	\$461,552
Executive Chef	11-9051	2	\$24.67	\$51,314	\$102,627	\$23.63	\$49,150	\$98,301
Box Office Supervisor	39-1021	3	\$19.74	\$41,059	\$123,178	\$18.96	\$39,437	\$118,310
Box Office	41-2031	12	\$12.04	\$25,043	\$300,518	\$12.04	\$25,043	\$300,518
Entertainment **	27-4011	40	\$20.79	\$43,243	\$1,729,728	\$19.81	\$41,205	\$1,648,192
Stage Managers	27-	3	\$28.39	\$59,051	\$177,154	\$27.32	\$56,826	\$170,477

			Boston MSA			State of Massachusetts		
Position	SOC Code	Est. FTEs	Mean Hourly Rate	Annual Rate	Total Compensation	Mean Hourly Rate	Annual Rate	Total Compensation
	2012							
Promotions Booth	41-9041	35	\$16.31	\$33,925	\$1,187,368	\$16.12	\$33,530	\$1,173,536
Promotions Supervisor	39-1021	8	\$19.74	\$41,059	\$328,474	\$18.96	\$39,437	\$315,494
Telemarketing/Reservations	41-9041	95	\$16.31	\$33,925	\$3,222,856	\$16.12	\$33,530	\$3,185,312
Bus Greeter	41-9041	12	\$16.31	\$33,925	\$407,098	\$16.12	\$33,530	\$402,355
Hosts	41-9099	12	\$20.78	\$43,222	\$518,669	\$21.43	\$44,574	\$534,893
Player Development Execs	11-2022	10	\$56.01	\$116,501	\$1,165,008	\$54.54	\$113,443	\$1,134,432
Executive Director Player Development	11-2022	1	\$56.01	\$116,501	\$116,501	\$54.54	\$113,443	\$113,443
Director Advertising	11-2021	1	\$56.01	\$116,501	\$116,501	\$56.19	\$116,875	\$116,875
Director Public Relations	11-2031	1	\$53.02	\$110,282	\$110,282	\$51.63	\$107,390	\$107,390
Director Database Marketing	11-2021	1	\$56.01	\$116,501	\$116,501	\$56.19	\$116,875	\$116,875
Director Marketing Operations	11-2021	1	\$56.01	\$116,501	\$116,501	\$56.19	\$116,875	\$116,875
Hotel/F&B Cashier	41-2011	34	\$9.38	\$19,510	\$663,354	\$9.39	\$19,531	\$664,061
Accountants	13-2011	10	\$30.29	\$63,003	\$630,032	\$29.84	\$62,067	\$620,672
Accounting Clerks	43-3031	30	\$17.90	\$37,232	\$1,116,960	\$17.52	\$36,442	\$1,093,248
Casino Accounting	43-3031	20	\$17.90	\$37,232	\$744,640	\$17.52	\$36,442	\$728,832
Casino Controller	11-3031	1	\$53.49	\$111,259	\$111,259	\$51.54	\$107,203	\$107,203
Director Financial Analysis	11-3031	1	\$53.49	\$111,259	\$111,259	\$51.54	\$107,203	\$107,203
Director Financial Reporting	11-3031	1	\$53.49	\$111,259	\$111,259	\$51.54	\$107,203	\$107,203
Controller	11-3031	1	\$53.49	\$111,259	\$111,259	\$51.54	\$107,203	\$107,203
Director Hotel Accounting	11-3031	1	\$53.49	\$111,259	\$111,259	\$51.54	\$107,203	\$107,203
Purchasing Manager	11-3061	1	\$44.66	\$92,893	\$92,893	\$43.03	\$89,502	\$89,502
Purchasing Agent	43-3061	10	\$18.53	\$38,542	\$385,424	\$17.45	\$36,296	\$362,960
Warehouse Supervisor	43-1011	6	\$25.74	\$53,539	\$321,235	\$24.97	\$51,938	\$311,626
Warehouse Attendant	43-5071	20	\$15.23	\$31,678	\$633,568	\$14.81	\$30,805	\$616,096
Director IT	11-3021	1	\$56.53	\$117,582	\$117,582	\$55.95	\$116,376	\$116,376
Information Technology Techs and Programmers	15-1041	15	\$27.22	\$56,618	\$849,264	\$26.45	\$55,016	\$825,240
Computer Operator	43-9011	12	\$18.42	\$38,314	\$459,763	\$18.25	\$37,960	\$455,520
Internal Audit	13-2011	5	\$30.29	\$63,003	\$315,016	\$29.84	\$62,067	\$310,336

			Boston MSA			State of Massachusetts		
Position	SOC Code	Est. FTEs	Mean Hourly Rate	Annual Rate	Total Compensation	Mean Hourly Rate	Annual Rate	Total Compensation
Executive Director Internal Audit	11-3031	1	\$53.49	\$111,259	\$111,259	\$51.54	\$107,203	\$107,203
Human Resources Supervisors/Professionals	13-1071	10	\$30.44	\$63,315	\$633,152	\$29.99	\$62,379	\$623,792
Executive Director Human Resources	11-3049	1	\$53.12	\$110,490	\$110,490	\$51.64	\$107,411	\$107,411
Director Employee Relations	11-3041	1	\$50.64	\$105,331	\$105,331	\$49.72	\$103,418	\$103,418
Director Personnel	11-3042	1	\$52.90	\$110,032	\$110,032	\$52.12	\$108,410	\$108,410
Human Resources Administrative	43-4161	20	\$18.66	\$38,813	\$776,256	\$18.30	\$38,064	\$761,280
Executive Directors	11-3011	0	\$39.98	\$83,158	\$0	\$37.88	\$78,790	\$0
Administrative Professionals	43-6014	60	\$17.16	\$35,693	\$2,141,568	\$16.70	\$34,736	\$2,084,160
Vice Presidents	11-1011	7	\$73.12	\$152,090	\$1,064,627	\$70.43	\$146,494	\$1,025,461
Total Casino Jobs		4,377			\$120,938,929			\$119,641,611
Average			\$26.43	\$54,970		\$25.82	\$53,702	
Weighted Average			\$13.28	\$27,631		\$13.14	\$27,335	

Source: Bureau of Labor Statistics, Area: Boston MSA, Massachusetts State, National

We estimate that total annual salaries and wages would be \$121 million for a Boston casino and \$119.6 million for each of the two casinos in the eastern and western regions of Massachusetts. With benefits, total compensation would be \$157.3 million for Boston and \$155.5 million for each of the other two properties. This represents more than \$468 million in annual direct compensation in Massachusetts with three casino properties. With benefits, the average compensation level for casino workers in Massachusetts would be \$35,641.

Employee turnover

Two aspects of turnover must be considered in assessing the impact to the community from three new casinos in Massachusetts. Short-term turnover that will occur for existing hotels and restaurants in the areas of the casinos and ongoing turnover that will continue in the casinos as the new market matures.

Short-term turnover

The opening of a new casino in an area generates excitement and opportunity for advancement for other service workers and professionals in the area. Some workers from other industries will be motivated to seek employment at the new casino while others will remain with their existing employer for various reasons including comfort level, preferred days off, preferred shift schedule and length of service accruals such as number of vacation days.

If employees are hired from existing hotels and restaurants, a chain reaction of promotions occurs at the businesses from which employees are leaving. This can lead to improved opportunities for advancement for lower-level employees, resulting in increased earnings and morale.

Long-term turnover

Turnover in a typical casino ranges between 25 percent and 30 percent annually. This rate can vary significantly by department, by casino, by market and by operator. One factor that can impact the potential for turnover is the opportunity for workers to move to another property in the general vicinity without having to relocate. Effectively, this means that the more gaming properties in a market, the more opportunities arise to change jobs for either better career opportunities, greater benefits (including preferred days or hours) or, in some cases, for higher compensation. We note, however, that compensation for the same job position will likely level off quickly among operators, who are keenly aware of wages and salaries at competitive properties.

Depending on the location of the casinos in Massachusetts, it may or may not be convenient for workers to move to other casinos. In Atlantic City, where the 11 casinos are in close proximity to each other, turnover averages closer 30 percent and sometimes even higher. At Philadelphia Park casino in Pennsylvania, however, where casinos are, by legislation, spread out, turnover is averaging closer to 25 percent.

Based on those factors, we can reasonably project annual turnover at the Massachusetts casinos at about 25 percent, which translates into approximately 1,100 job openings annually at each casino. These will be disproportionately greater in certain job categories, such as unskilled, entry-level positions, where the turnover rate can reach as high as 40 percent.

Labor pool analysis

The following section details unemployment rates in Massachusetts by Metropolitan Statistical Area (MSA) and by county. It discusses areas of greatest opportunity, the impact of the proposed casino projects on employment in Massachusetts, and training requirements and strategies to maximize the employment benefit to state residents.

Area unemployment analysis

Unemployment in Massachusetts is slightly lower than the national average and it has been trending downward from a peak of 5.9 percent in 2003.¹³² In April 2008, the unemployment rate was 5 percent for the nation and 4.1 percent for Massachusetts. Several areas in the state, however, have unemployment rates that are significantly higher than the national average.

Area unemployment by MSA

By Metropolitan Statistical area, New Bedford MSA has the highest unemployment rate in Massachusetts at 8.2 percent. The following table provides unemployment rates by MSA, as well as in all of Massachusetts and the nation.

¹³² Bureau of Labor Statistics, Massachusetts Economy at a Glance, Back Data, <http://www.bls.gov/eag/eag.ma.htm>

Metropolitan Statistical Area	Employed	Unemployed	Unemployment Rate
Massachusetts			
Barnstable	114,900	8,200	6.7%
Boston, Cambridge, Quincy	2,368,200	109,200	4.4%
Leominster, Fitchburg, Gardner	67,500	4,600	6.3%
New Bedford	77,500	6,900	8.2%
Pittsfield	36,800	1,900	5.0%
Providence, Fall River, Warwick	654,200	47,500	6.8%
Springfield	332,900	19,400	5.7%
Worcester	276,400	15,400	5.3%
State totals	3,257,100	151,700	4.5%
USA			4.8%

Source: Bureau of Labor Statistics, *Economy at a Glance, Metropolitan Statistical Areas Massachusetts, February 08, seasonally adjusted*, <http://www.bls.gov/eag/eag.ma.htm>

Area unemployment by county

Only five of the 14 counties in Massachusetts had unemployment rates below the national average. The following table provides the unemployment rates by county, as well as the state and national rates.

Counties	Employed	Unemployed	Unemployment Rate
Massachusetts			
Barnstable	103,565	7,904	7.1%
Berkshire	68,043	3,729	5.2%
Bristol	266,868	20,230	7.0%
Dukes	8,440	559	6.2%
Essex	354,274	19,103	5.1%
Franklin	37,196	1,819	4.7%
Hampden	208,377	13,510	6.1%
Hampshire	84,920	3,516	4.0%
Middlesex	782,588	31,062	3.8%
Norfolk	342,555	14,596	4.1%
Plymouth	245,869	13,923	5.4%
Suffolk	331,651	15,953	4.6%
Worcester	376,702	21,506	5.4%
State totals	3,257,100		4.5%
USA	299,398,484	151,700	4.8%

Source: Census2000, *Quick Facts by county, Population 2006 estimated, Below Poverty Level 2004, Degrees 2000* <http://quickfacts.census.gov/qfd/states/25000.htm>

Employment impact of the proposed casino projects

The jobs provided by three large casino projects will have a notable impact on employment in Massachusetts. We project the number of jobs for the three casinos at opening to be more than 13,000, about 9 percent of the total unemployed population of Massachusetts as of this writing.

Although the number of total jobs created by the casinos represents a large percentage of the unemployed population on a statewide basis, the impact on the unemployment rate for the state is not significant. If all casino jobs were filled by unemployed Massachusetts residents, which of course will not happen, it would reduce the unemployment rate by less than one-half percentage point, to 4.1 percent. If half of the jobs were filled by unemployed residents, the impact on the unemployment rate would be only 0.2 percent, to 4.3 percent

Depending on the location of the proposed casinos, the additional jobs can have a much more significant impact on local employment. The following table shows the percentage of unemployed residents that 4,377 jobs represents to each of the Metropolitan Statistical Areas in the state. It also shows the corresponding unemployment rate impact if 50 percent of the jobs were filled by unemployed residents.

The reduction in the unemployment rate if the casino was located in each of the MSAs listed below would be significant. In all but Boston and Providence MSAs the reduction would be more than a full percentage point.

MSA	Employed	Unemployed	Casino Jobs as % of unemployed	Current Unemployment Rate	Unemployment rate if 50% of jobs are filled by unemployed
Barnstable	114,900	8,200	53%	6.7%	3.1%
Boston,	2,368,000	109,200	4%	4.4%	4.2%
Cambridge,					
Quincy					
Leominster,	67,500	4,600	95%	6.3%	.3%
Fitchburg,					
Gardner					
New Bedford	77,500	6,900	63%	8.2%	3.0%
Pittsfield	36,800	1,900	230%	5.0%	NA
Providence,	654,200	47,500	9.2%	6.8%	6.2%
Fall River,					
Warwick					
Springfield	332,900	19,400	22.6%	5.7%	4.3%
Worcester	276,400	15,400	28.4%	5.3%	3.8%

Socio-economic factors

Overall, Massachusetts residents are better educated than the overall national population and fewer of them live below the poverty level. In the United States, 80.4 percent of the population 25 years and older has a high school diploma and 24.4 percent has a bachelor's degree. The percentage of Massachusetts residents over age 25 with a high school diploma is 84.8 percent and 33.2 percent have bachelor's degrees – almost 9 percentage points higher than the national average. In the United States, 12.7 percent live below the poverty level while in Massachusetts it is only 9.9 percent. Additionally, the Median Household income for Massachusetts is \$53,657 which is almost \$10,000 above the national average.

The following table provides the vital education and income statistics by county, as well as for Massachusetts and the nation. Casino development can have the most significant impact in – or adjacent to – those counties where below-poverty and unemployment rates are the highest.

Casinos have a large percentage of jobs that do not require high levels of education. Casinos often have a history of benefits such as tuition reimbursement, upward mobility, and on-the-job training that can help employees who start in entry level positions to grow and advance within the company.

Counties	Population	Median House-hold Income	% 25 and older with HS Diploma	% 25 and older with Bachelors	% Below Poverty Level	Unemployment Rate
Massachusetts						
Barnstable	224,816	\$50,334	91.8%	33.6%	7.3%	7.1%
Berkshire	131,177	\$41,589	85.1%	26.0%	10.5%	5.2%
Bristol	545,379	\$46,986	73.2%	19.9%	10.6%	7.0%
Dukes	15,515	\$51,490	90.4%	38.4%	6.2%	6.2%
Essex	735,958	\$52,050	84.6%	31.3%	10.3%	5.1%
Franklin	72,183	\$44,393	88.0%	29.1%	9.2%	4.7%
Hampden	460,520	\$40,595	79.2%	20.5%	15.1%	6.1%
Hampshire	153,471	\$48,359	89.4%	37.9%	9.7%	4.0%
Middlesex	1,497,016	\$62,854	88.5%	43.6%	8.1%	3.8%
Nantucket	10,240	\$58,525	91.6%	38.4%	4.5%	5.6%
Norfolk	654,753	\$67,066	91.3%	42.9%	5.4%	4.1%
Plymouth	493,623	\$60,359	87.6%	27.8%	7.8%	5.4%
Suffolk	687,610	\$41,587	78.1%	32.5%	16.7%	4.6%
Worcester	784,992	\$51,354	83.5%	26.9%	9.8%	5.4%
Massachusetts	6,437,193	\$53,657	84.8%	33.2%	9.9%	4.5%
USA	299,398,484	\$44,334	80.4%	24.4%	12.7%	4.8%

Source: Census 2000, QuickFacts by county, Population 2006 estimated, Below Poverty Level 2004, Degrees 2000
<http://quickfacts.census.gov/qfd/states/25000.htm>

Labor pool skills assessment

An adequate labor pool exists in Massachusetts to staff three casinos with 4,377 jobs each. The high percentage of high school and college graduates that exists in the state provides a skilled base of employees from which to draw for mid- and upper-level positions. Entry-level positions can be filled with unskilled workers who are trained on the job. A detailed training and recruiting plan follows this section.

Depending on where the casinos are located, there may be varying degrees of skilled employees already available in the workforce. In the Boston MSA, for example, the dense population and the plentiful supply of existing hotels and restaurants creates a skilled labor pool from which to draw for 65 percent of the positions in the casino properties as proposed. For example, according to the Bureau of Labor Statistics Occupational Employment Statistics, in the Boston MSA there are 186,410 food prep and server employees, 2,280 front desk clerks and 42,830 customer service reps.¹³³ Conversely, in the New Bedford MSA, no match could be found

¹³³ Bureau of Labor Statistics, Boston MSA, Occupational Employment Statistics, May 2006

for several hotel operations positions including security, housekeeping, PBX operator and others. This suggests employees in this area may need more on-the-job training than in the Boston MSA.

A strategy for hiring casino workers is outlined in the next section of this report.

Career paths

Casino employment typically provides an excellent career ladder for entry-level employees. People can begin to work in a casino with only one week of on-the-job training and, as experience is gained, they may be promoted into higher-paying positions. The following are some examples of career progression, showing the different compensation levels.

<i>Department</i>	<i>Entry Level, Mean Annual Compensation</i>	<i>Supervisor, Mean Annual Compensation</i>	<i>Manager/Shift Manager</i>
Slots	\$25,293	\$36,088	\$67,142
Tables	\$17,014	\$42,390	\$67,142
Hotel Front Desk	\$23,754	\$39,437	\$51,938
Housekeeping	\$22,090	\$39,624	\$51,938
Food and Beverage	\$21,840	\$32,968	\$49,150
Security	\$25,168	\$47,216	\$67,142
Casino Cashiering	\$24,107	\$42,390	\$67,142

Source: Mean Hourly Rate information, Bureau of Labor Statistics, Occupational Labor Statistics

Employee skill requirements

The following section details our analysis of the skills requirements of employees needed to staff each casino/hotel in the study. We classified the positions into the following categories:

- Entry level
- Semi-skilled, non-gaming
- Semi-skilled, gaming
- Highly-skilled, non-gaming
- Highly-skilled, gaming

Entry level

Employees with no experience can be prepared for entry-level positions with a small amount of on-the-job training so the qualified applicant pool is greatest in this classification. Job specific training for this group typically can be completed in one week or less. Examples of jobs that fall into this category are clerical staff, food servers, housekeeping, porters, liquor attendants, food and beverage cashiers, and cocktail servers.

Semi-skilled, non-gaming

These positions require either general experience in a service-related business or on-the-job training completed by an experienced supervisor or manager. Unskilled workers for this group can typically be trained in one to two weeks. Examples of jobs that fall into this category are hotel and food and beverage supervisors, cooks, parking attendants, and lower level accounting, IT, and human resources employees.

Semi-skilled, gaming

These positions require a slightly higher level of training than the non-gaming positions. These positions may be filled with inexperienced employees; however an experienced gaming professional must complete specific on-the-job-training for them. Examples of jobs that fall into this category are cage cashiers, count room employees, security officers, surveillance, pit clerks, and slot service attendants. Basic math skills are needed for many of these positions.

Highly-skilled, non-gaming

These positions require advanced training, education, and/or experience and typically three to five years of experience in the area of expertise, or a formal degree. Examples of jobs that fall into this category are management positions in hotel, or food and beverage, and professionals in such areas as accounting, information technology, finance human resources, and the trades.

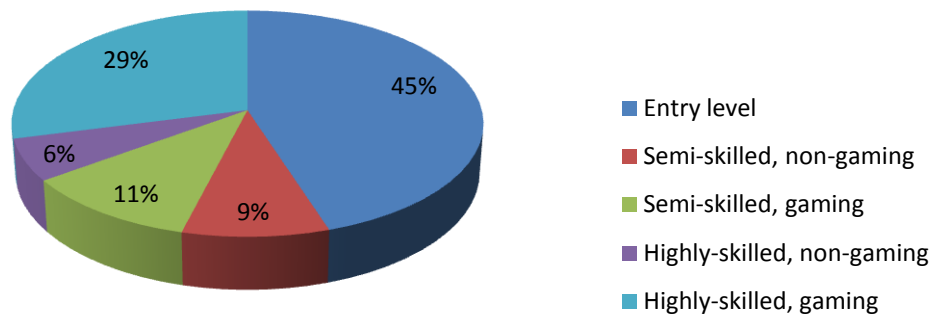
Highly-skilled, gaming

These positions require specialized training and material experience at high levels within highly specialized areas of the gaming industry. Examples of jobs that fall into this category are casino dealers, slot technicians, table games floor persons, pit bosses, and department directors.

The following table provides a summary of training requirements for employee skill sets, as well as the number of positions in typical Massachusetts casino resort used throughout this report:

<i>Category</i>	<i>Jobs</i>	<i>Training required</i>	<i>No. of positions</i>
Entry Level	F&B, Convention Services, Retail, Marketing, Hotel	1 week on-the-job-training	2,008
Semi-skilled Non-Gaming	Operations Supervisors, Entertainment, Accounting, Human Resources, Executive Administrative Staff	1 to 2 weeks on-the-job-training	382
Semi-skilled Gaming	Slots, Security, Surveillance, Cashiering, Internal Audit	2 weeks on-the-job-training Basic Math Skills	466
Highly-skilled Non-Gaming	Department Heads, Facilities, Entertainment, Information Technology Professionals	3 – 5 years experience and/or College Degree	254
Highly-skilled Gaming	Department Heads, Slot Technical, Tables, Executive	Dealer school Slot Technical Training 5 – 10 years experience and/or College Degree	1,267
	Total		4,377

The following chart shows the percentage of jobs that fall into each category.



Recommendations: recruiting and training strategies

The following section outlines some potential strategies to maximize the positive impact of each of the proposed Massachusetts casinos. To maximize the positive benefit to the state as noted above, public/private partnerships have proven to be successful in other jurisdictions and should be used as a model in Massachusetts. By focusing hiring efforts on pockets of the local communities that need it the most, casino projects can have a significant impact in improving the quality of life for many Massachusetts residents.

Entry level: 2,008 positions, 1 week on-the-job-training

Entry-level positions have the lowest level of job skills requirements, so they have the highest potential to create opportunity for residents who may be unemployed or underemployed because of lack of skills or experience. The location of the proposed casinos will determine the areas that should be targeted to maximize community impact while hiring employees into this classification. A Casino Workforce Development Partnership (CWDP) will be the most effective way to achieve this goal.

If the casinos are located in Boston, New Bedford, and Springfield, the impact to the community can be significant. Many of the 2,008 entry-level positions can be successfully performed by workers who have not obtained a high school diploma. Kitchen utility, housekeeping and public areas are examples of jobs that are appropriate for employees with this skill level. Approximately 700 jobs in each casino fall into this category. Suffolk, Bristol, and Hampden counties each has more than 20 percent of residents age 25 and older without a high school diploma. With only one week of on-the-job-training required, these jobs represent an excellent opportunity for employees to get a start in the industry and begin a career path to jobs of increasing skill levels. This can be accomplished through the CWDP by providing the necessary training to ensure employees are work -ready.

The remaining 1,300 jobs in the entry-level classification require a slightly higher skill level than those discussed above but still only require one week of on-the-job training. Examples of jobs in this category are clerical staff, food servers, liquor attendants, food and beverage cashiers, and cocktail servers. These positions will command a higher wage rate and some of them have the opportunity for gratuities, which can significantly add to the earning potential. These positions are also an excellent way to begin a career path for workers with a minimal level of basic skills.

Semi-skilled, non-gaming: 382 positions, 1 to 2 weeks on-the-job training

Semi-skilled, non-gaming positions are an excellent opportunity to recruit graduating high school seniors who do have college plans or those who must work to help pay for college expenses. The semi-skilled job classification provides a way to introduce those high school graduates to a worthwhile career path that can lead to higher paying positions as experience is acquired.

This is also a category where newly graduated college students may be recruited for their first job with the goal of moving into highly skilled positions as experience is obtained.

Massachusetts has an extensive system of higher education, with five campuses of the University of Massachusetts, nine state colleges, 15 community colleges, and 69 private colleges and universities. Virtually all of the colleges and universities offer degrees in business and information technology, among other majors. The University of Massachusetts-Boston also offers a degree in hospitality. Many of the community colleges offer certificates or degrees in hospitality, including Berkshire, Bristol, Bunker Hill, Holyoke, Massachusetts Bay, Middlesex, Northern Essex, Quinsigamond, and Roxbury. Students earning a certificate or graduating with a degree in hospitality management are exceptionally qualified for the semi-skilled jobs in this classification. The following lists the local state colleges and universities and community colleges with relevant fields of study:

Colleges/Universities	Enrollment¹³⁴
University of Massachusetts Amherst	25,593
University of Massachusetts Boston	13,300
University of Massachusetts Dartmouth	8,700
University of Massachusetts Lowell	12,000
Bridgewater State	9,800
Framingham State	5,903
Westfield State	5,531
Fitchburg State	5,201
Salem State	8,790
Worcester State	3,342
Massachusetts College of Liberal Arts	1,850

¹³⁴ Obtained from each individual website of the college or university or from other public sources.

Colleges/Universities	Enrollment¹³⁴
Berkshire Community College	2,400
Bristol Community College	6,900
Bunker Hill Community College	8,500
Cape Cod Community College	4,000
Greenfield Community College	3,000
Holyoke Community College	9,000
Massachusetts Bay Community College	5,040
Massasoit Community College	6,795
Middlesex Community College	11,000
Mount Wachusett Community College	4,170
North Shore Community College	6,604
Northern Essex Community College	6,000
Quinsigamond Community College	13,000
Roxbury Community College	2,382
Springfield Tech	3,285

Semi-skilled, gaming: 466 positions, 2 weeks on-the-job-training, basic math skills

This classification is an opportunity for residents who are unemployed or underemployed to advance into a gaming position and receive on-the-job training. In most jurisdictions employees in this classification must be 21 years old to obtain a gaming license. It may prove to be in the licensee's best interest to hire some experienced employees from casinos in other states, but for the most part, local employees with basic math skills can be trained in a relatively short period.

The higher mean wage of these positions enables employees to either commute from farther away or relocate to the area. The mean annual income of the Semi-Skilled Gaming classification is \$38,820. These jobs provide an excellent opportunity to recruit employees from those areas that need employment the most, even if they are not in the immediate vicinity of the new casinos.

Highly-skilled, non-gaming: 254 positions, 3 to 5 years experience and/or college degree

It is essential that any new entry into a market hire experienced individuals in this classification to ensure successful operation of the property. In the Highly-Skilled, Non-Gaming classification this may be accomplished by hiring experienced workers from the local community from existing hotel and restaurant facilities. This will be more feasible in certain areas of the state depending on where the casinos are located. If a casino is located in the Boston or Springfield areas, for example, there is a strong existing base of experienced workers from which to draw. According to the Bureau of Labor Statistics there are about 205,100 jobs in the Hospitality and Leisure segment for the Boston MSA¹³⁵ and there were 24,600 in the Springfield

¹³⁵ Bureau of Labor Statistics, Economy at a Glance, Metropolitan Statistical Area <http://www.bls.gov/eag/eag.ma.htm>

MSA. In other areas, however, the base of experienced workers is not as strong. In New Bedford MSA, there are only about 6,200 jobs in this segment. It may be more difficult to find experienced workers in the New Bedford area so it may be necessary to import workers from other parts of the state or from out of state.

It is anticipated that the number of experienced workers brought in from other jurisdictions will be a relatively small percentage of the total number of employees hired. At Philadelphia Park Casino in Pennsylvania, for example, only about 20 percent¹³⁶ of all workers hired at opening were experienced workers from other casino jurisdictions. The remainder was hired from the local community. This casino is located only one hour from Atlantic City.

Spectrum analyzed an Internal Revenue Service migration database. It tracks income tax returns of taxpayers who move from one county into another. Our analysis of the database shows that most of the movement into New London County – home to Foxwoods and Mohegan Sun – was from within the state of Connecticut itself. The average yearly migration of households into New London County during the past 12 years has been roughly 6,500, or 13,000 people. The top three counties where people came from were Hartford, Windham and Middlesex, all in Connecticut. Another high exporter of residents was Washington County in Rhode Island.

But the data also shows an Atlantic County, N.J., link as well. From 1995 to 2007, 256 households, or 490 people, moved from Atlantic County (home of Atlantic City) into New London County. It is likely that many of those people worked in the casino industry in Atlantic City. The IRS database shows that there was little, if any movement, from Atlantic County to southeastern Connecticut prior to the opening of Foxwoods and Mohegan Sun. The number of Atlantic County residents moving into New London County represents a small percentage of the overall casino workforce at Foxwoods and Mohegan Sun. But executives at both casinos acknowledged that many of the top managers have been hired from Atlantic City casinos.

Indeed, both CEOs of the Connecticut casinos worked at one time in Atlantic City. So, too, did many other past and present executives at both tribal properties. It is likely that at least some of the high-skilled management positions may be filled by executives from outside Massachusetts.

Highly-skilled, gaming: 1,267 positions, 5 to 10 years experience and/or college degree

About 960 of the 1,276 jobs in this classification are casino/poker dealers, and 33 of them are slot technicians. These jobs require specialized training, yet the training can be accomplished in a relatively short period, providing opportunity to a large section of the labor pool. The high pay of the slot technician position and the dealer wages, including gratuities, makes these jobs very desirable. People will be willing to commute and possibly relocate to fill these positions.

Rapidly changing slot technology is forcing a change in the type of knowledge and skills required in this area. Indeed, the traditional “slot technician” job will soon require computer networking skills and much higher educational levels.

The dealer and slot technician positions are an excellent opportunity to train local residents with an aptitude for technical work. Massachusetts’ strong network of community

¹³⁶ Interview with Human Resources employee, Philadelphia Park Casino

colleges is a natural mechanism for providing this training especially with a public/private partnership like the CWDP described above. Several of the community colleges in Massachusetts already list Workforce Development Partnerships on their websites.

The time frame for a typical dealer training class is as follows:

- Craps: 160 hours
- Blackjack: 80 hours
- Roulette: 80 hours
- Baccarat: 80 hours
- Poker: 80 hours

The timeframe for a slot technician training class for a person without any prior knowledge or experience is 375 classroom hours. For a person who is already skilled in electronics, the training period is about 200 hours of on-the-job-training.

Employment and workforce development

Public policy considerations

The establishment and regulation of casino gaming in Massachusetts would give the Commonwealth a unique opportunity to expand its workforce development efforts to address the vital needs of the unemployed and underemployed as well as people on welfare. The public interest would be best served through private/public partnerships designed to provide basic skills and workplace training to those who need it the most. Additionally, the gaming industry's efforts to help lower-skilled, entry-level workers become part of the Massachusetts labor force will help instill public confidence in casino gaming.

Through the legalization of gaming, Massachusetts can leverage casino licensees to realize many of its workforce development public policy goals. Through a statutory framework and incentives, Massachusetts can lead casino licensees to develop innovative workforce development programs. These programs would meet the new labor demand by providing suitable job opportunities for thousands of workers. Workforce development partnerships between casino licensees and the other major stakeholders will enable the Commonwealth to maximize the economic benefits of gaming.

In Connecticut, the introduction of casino gaming at Foxwoods Resort Casino by the Mashantucket Pequot Tribal Nation is a good example of how a private gaming employer assumed a leadership role in creating job opportunities for those who need it the most. The Tribe's Work ETC (Work, Education, Transportation and Childcare) program achieved significant welfare reform by lifting families out of poverty through training and employment.

The Mashantucket Pequot Tribal Nation, working in a partnership with the public sector, developed a unique program to address the vital needs of people on welfare who were seeking a new job or a return to the workforce. Since its inception in 1997, the Work ETC program trained and employed more than 150 people in just its first three years. The Tribe was the first private

employer in Connecticut to play such an integral part in the support of a complete welfare-to-work program by offering financial support, administrative and government support and, most importantly, entry-level positions that were suitable to the participants. This program has resulted in reduced state transfer payments, generated tax revenue and induced new spending on consumer goods¹³⁷.

Case study: Atlantic City Jobs & Opportunities Program¹³⁸

Borgata, a 2,000-room luxury casino hotel in Atlantic City, is a joint venture between Boyd Gaming and MGM Mirage. When it opened in July 2003, Borgata was the first new casino hotel property in Atlantic City in 13 years. Since its debut, Borgata has consistently been Atlantic City's top grossing casino.

The Atlantic City Jobs & Opportunities Program is a commitment made by Borgata and MGM Mirage in August 2000 to the City of Atlantic City to provide training and employment opportunities to unemployed and underemployed Atlantic City residents. While not designed solely for the benefit of Borgata, the program's goal is to improve the quality of Atlantic City's workforce overall and thereby improving Borgata's pool of job candidates.

The program was initially funded by approximately \$1 million from Boyd Gaming and MGM Mirage. The program has leveraged this initial funding by securing over \$1.5 million in grants through the federal Workforce Investment Act and Perkins Vocational and Technical Education program, the New Jersey Department of Education, and the New Jersey Department of Labor and Workforce Development's Customized Training Program. To date, the Atlantic City Jobs and Opportunities Program has spent more than \$3 million to train and secure jobs for more than 2,200 Atlantic City residents. This number exceeds the original goal of 2,000 job placements.

The program is a collaborative effort that utilizes broad community outreach to further its objectives. The program's participants include:

- Atlantic City casino industry
- City of Atlantic City
- Atlantic City School District
- Atlantic Cape Community College
- Rutgers University
- Atlantic County Institute of Technology
- New Jersey Department of Education
- New Jersey Department of Labor and Workforce Development

¹³⁷ "The Economic Impact of the Mashantucket Pequot Tribal Nation Operations on Connecticut," November 28, 2000, Connecticut Center for Economic Analysis, p. 3

¹³⁸ This section of the analysis was based, in large measure, on an interview with Eric Reynolds, vice president of Atlantic City Jobs & Opportunities for Borgata.

- Atlantic City Housing Authority
- Atlantic City Rescue Mission
- Atlantic Cape May Workforce Investment Board
- Atlantic Cape May Careers Centers, Inc.
- Atlantic City Employment Service
- Atlantic County Department of Family and Community Development
- Atlantic City Family Centers
- Covenant House New Jersey
- South Jersey Legal Services
- Atlantic County Social Service and Healthcare Network
- Faith and Civic Communities
- Local businesses

The program's main components include:

- Life and employability skills training
- Occupational skills training
- Professional development
- The Academy of Hospitality and Marketing Careers
- The Building and Construction Trades Apprentice Program
- Adult basic education/GED classes
- Job placement activity

The Life and Employability Skills Training component offers a flexible, individualized approach to workforce development through a series of multiple assessments, career exploration exercises and developmental activities. Instructors from Atlantic Cape Community College facilitate this component of the program. The goal of this training component is to improve an individual's success in identifying, finding and keeping employment by:

- Improving an individual's understanding of their aptitudes, attitudes, skills, behavior and life coping skills.
- Improving an individual's understanding of employer expectations and requirements of today's work environment.
- Developing an individual's job search and job retention skills.

This component of the program includes the following services:

- Adult basic education
- Literacy (math and reading)

- GED prep
- English as a Second Language
- Expungement assistance
- Citizenship, driver's and casino licensing assistance
- Social services referrals

The Occupational Skills Training component offers training for participants in the following gaming and hospitality positions, among others:

- Casino dealer
- Security
- Slot attendant
- Slot technician
- Coin and cage cashiers
- Front desk clerk
- Pit clerk
- Culinary occupations
- Food service
- Slot marketing
- Office administration
- Computer competencies
- Retail sales
- General maintenance

The Professional Development component provides the necessary knowledge, skills and abilities that an underemployed individual needs for career enhancement or, in some cases, simply a full-time job. This component assesses participants' knowledge, skills and abilities as well as their aptitudes, interests and preferences and develops individual career plans. The plan identifies the competencies needed for a specific job or career as well as the experience, education, certification or license required for full-time employment or upward mobility.

The Academy of Hospitality and Marketing Careers is the youth-oriented component of the Atlantic City Jobs and Opportunities Program. The Academy is a partnership between the Borgata, the Atlantic City School District and the Atlantic City High School Business Department. It offers two-year programs in hospitality management, travel, tourism and marketing to 11th – and 12th-grade students. The program uses a school-to-careers approach to integrate academic learning with occupational training. The program offers 12th-grade students 400 hours of paid work experience in the hospitality, travel and tourism industries through cooperative education. Classroom instruction is supplemented by field trips to area employers and job shadowing activities. The goals of this unique program are to:

- Acquaint students with the tremendous career opportunities in the hospitality, travel and tourism industries.
- Prepare students for entry-level positions and introduce them to management opportunities.
- Provide college bound students with the background they need for post-secondary study in hospitality and marketing.

Through the Building and Construction Trades Apprentice Program, Borgata has established a goal to develop a pool of qualified Atlantic City residents to meet the demands and admission requirements of trade union apprenticeships leading to journeyman status. The program provides financial support and recruitment for building and construction trade union pre-apprentice and apprentice programs.

Recommendation: Casino Workforce Development Partnership program

The enabling gaming legislation should clearly state that it is in the public interest for the Commonwealth to maximize the economic benefits of gaming by establishing new programs to provide training and job opportunities to those who need it the most. The enabling legislation should include provisions that expand the Commonwealth's workforce development efforts by establishing private/public partnership programs between the casino licensees and the other major stakeholders. The programs should focus on how best to meet the labor demand generated by the casino resorts and also address the vital needs of the unemployed, underemployed as well as people on welfare.

The Massachusetts Casino Workforce Development Partnership (CWDP) program could utilize the existing structure of the Massachusetts Workforce Development System. The lead agency for workforce development at the state level in Massachusetts, the Massachusetts Department of Labor and Workforce (DLWD) and the two principal workforce development agencies under the DLWD, the Commonwealth Corporation (CommCorp) and the Division of Employment and Training (DET) could lead the public sector's efforts in developing these initiatives.

The Commonwealth Corporation, a quasi-public agency, serves as the Commonwealth's fiscal agency for federal Welfare to Work grants and portions of the Workforce Investment Act (WIA) and administers Job Training Partnership Act (JTPA) funds. The foundation of the CommCorp's work is partnership: bringing the private and public sectors together to create successful outcomes. The agency has a 25-year history of developing and implementing innovative workforce development programs in Massachusetts. As a result, it would clearly be the ideal organization to lead any casino licensee/public sector initiatives to provide workers with basic skills and workforce training needed to meet the labor demand created by casino gaming.

The CWDP would incorporate CommCorp's approach, which is to meet the needs of private employers and workers through unique workforce development programs designed for specific sectors of economy. CommCorp's methodology (see below) is well suited to meet the

labor and workforce development challenges Massachusetts would face if casino gaming is legalized:

- Identifying critical needs
- Delivering effective services
- Sharing promising practices

Identifying Critical Needs - CommCorp analyzes labor market information to identify service and skill gaps. They utilize industry/employer needs assessment and research and data to design programs. For example, according to the Massachusetts Job Vacancy Survey (2nd Quarter-2007) 65 percent of employers in Massachusetts were satisfied with the information technology (IT) skills level of their new hires. However, only 38 percent of employers in the accommodation and food service sector were satisfied with the IT expertise of their new hires. This skills gap is likely to have an impact on the Massachusetts labor market if casino gaming is established because this is an industry that hires disproportionately large numbers of first-time job seekers who tend to lack related work experience.

Delivering Effective Solutions - CommCorp designs sector initiatives that build worker skills and address employer job vacancies. They also facilitate coalitions and partnerships that connect school, employers, colleges and community resources to improve educational and employment opportunities for youth and adults. As outlined in this report, Connecticut and New Jersey are good examples of where casino gaming employers assumed a leadership role by forming partnerships and/or collaboratives to realize successful workforce development outcomes.

Sharing Promising Practices – This includes evaluation of demonstration projects with results and implications for practitioners and policymakers, impact studies and calculation of return on investment resulting in documentation and dissemination of lessons learned and promising practices. In this regard, Massachusetts can use the experience of other gaming jurisdictions in formulating an appropriate strategic plan to confront the critical issues concerning labor and workforce development.

To guarantee an adequate funding source for the CWDP, the enabling legislation should provide for the establishment a CWDP Trust Fund. Initially, these funds could be derived from a set-aside of casino licensing fees. To ensure a permanent and stable funding source for the program, the enabling legislation should also include a provision which mandates that a fixed percentage of gross casino gaming revenues be dedicated to the trust fund. As in the case of the Atlantic City Jobs and Opportunities Program, additional funding can be derived from direct contributions from casino operators as well as leveraging available funds through appropriate federal grant programs.

These funds could be targeted toward eliminating the backlog in demand for workplace literacy (reading and math,) adult basic skills education, General Equivalency Diploma (GED) and English as a Second Language programs. The funding could also be used to provide other supplemental education and support service such as citizenship, drivers and casino licensing assistance and appropriate social services referrals.

The leadership of the CWDP program would be addressed by the establishment of a statutory CWDP Advisory Board with clear oversight authority to develop and implement the

program. The members of the Board could include, but not be limited to, representatives of the following stakeholders:

- Casino licensees
- Local school districts
- Local municipalities
- Colleges and universities
- Community colleges
- Casino trade schools
- Massachusetts Department of Labor and Workforce Development
- Massachusetts Commonwealth Corporation
- Local/Regional Workforce Investment Boards (WIBs)
- Employment and Career Services Centers
- Massachusetts Department of Education
- Massachusetts Department of Transportation
- Organized labor community
- Local/regional family and community development agencies
- Local/regional social services agencies
- Faith-based community
- Civic organizations
- Local businesses

Massachusetts can maximize the economic benefits of casino gaming by expanding the Commonwealth's workforce development public policy efforts to address the employment needs of those who need it the most. Through private/public partnerships designed to provide basic skills and workplace training, Massachusetts can lead casino licensees to develop innovative programs which will result in suitable job opportunities for thousands of workers.

By including provisions in the casino gaming enabling legislation to establish and fund the Casino Workforce Development Partnership program, which utilizes the expertise of the Commonwealth Corporation, Massachusetts can establish a model casino workforce development public policy program that would serve the public interest and instill public confidence in casino gaming.

Section IV: Social Impacts

A critical question on the minds of Massachusetts' citizens, civic leaders and legislators considering whether to introduce or expand legalized gambling in their community is how it will impact crime and problem gambling. The question is not an easy one to answer conclusively. The national experience since legalized gambling saw its first major expansion into Atlantic City 30 years ago offers only limited guidance. The one clear and certain lesson learned since then is that there is no "one size fits all" state policy on gambling.

Furthermore, establishing exactly how gambling related costs and benefits are best measured, evaluated and interpreted is subject to different analytical frameworks, methodologies, and more importantly, personal values. In Massachusetts, at the present time, any analysis is a bit more complicated since the exact location and composition of the three gaming resorts outlined in the legislative proposal remain to be determined.

The literature on the economic impacts of casino gaming is in broad agreement that typically there are many ostensible benefits to the host communities including job creation, new tax ratables and economic growth. In the case of Atlantic City, as a longstanding example, casino-generated economic growth brought the region better access to health care and services, more retail and dining opportunities, and a greater variety of cultural and entertainment opportunities.

In 2006, nationwide gross gaming revenues grew to \$32.42 billion. Of that amount, more than \$5 billion was redirected to state and local governments through taxation. More than 366,197 individuals who collectively earn a total of \$13.3 billion are employed in 460 commercial casinos in 11 different states.¹³⁹

Economic stress and fiscal pressures are often the catalyst behind most state initiatives to expand gambling. By legalizing or expanding gambling, governments hope to avoid implementing new or increased taxes, which often face strong public resistance. Instead, policymakers hope to augment the state treasury in what appears to be a relatively painless fashion by capturing revenue from activities that would otherwise go outside the state or might otherwise lost to the underground economy.

Massachusetts is currently facing budgetary problems. Income tax revenues are expected to shrink in the coming year, which will worsen an anticipated \$1.3 billion budget deficit. Municipal officials, heavily dependent on state aid, say their budget problems have already risen to crisis proportions.¹⁴⁰ Cities and towns throughout Massachusetts face the prospect of deep cuts in school aid and local revenue and state aid can't keep up with such rapidly rising expenses as employee health insurance, heating oil, and even street paving.¹⁴¹ In an interview, Thomas Ambrosino, Mayor of Revere City, predicted a bleak economic future for his city if new sources

¹³⁹ "2007 State of the States: The AGA Survey of Casino Entertainment", American Gaming Association, p. 2.

¹⁴⁰ Matt Viser, "State's fiscal picture dims: Cuts, tax hikes may be on table," The Boston Globe On Line, www.boston.com, March 28, 2008.

¹⁴¹ Eric Moskowitz, "Deep cuts loom across state," *Boston Globe*, April 6, 2008.

of revenue are not found. Ambrosino, who supports the administration gambling proposal, expressed his views on the matter bluntly: “If not this, then what?”¹⁴²

To those who believe that the social costs of increased gambling opportunities extend beyond crime and problem gambling, the social costs simply outweigh the economic benefits. These individuals believe that governments may be making a Faustian bargain when it comes to gambling. They believe that the impacts of gambling include qualitative considerations that transcend standard economic metrics. They hold the view that gambling may subvert traditional family values that serve as the bedrock to social stability. They are not likely to change to a more favorable position regarding this matter despite any economic blessings that gambling may bring, yet their views cannot be ignored.

This point of view was expressed best by Irving Kristol on the editorial pages of the *Wall Street Journal* at a time when a new expansion of legalized gambling was poised to begin.¹⁴³ He argues that a gambling environment “...most definitely undermines the classical virtues (moderation, self reliance, self discipline, thrift, diligence, etc.) while nourishing the classical vices (extravagance, avarice, the lack of social responsibility, etc.).”¹⁴⁴ Readily accessible gambling undermines positive virtues by encouraging people to believe that there is an easy way to quick wealth. The subversion of these values, some believe, are what lead to the problems of increased crime and problem gambling in gaming communities, as well as a breakdown in the social order.

We believe that the bottom line on the ongoing economic impacts vs. the social impacts is best expressed in the title of the April 2000 U.S. Government Accounting Office report, “Impact of Gambling: Economic Effects More Measurable Than Social Effects.” The GAO report said:

“Neither NGISC [the 1997-99 National Gambling Impact Study Commission] nor our Atlantic City case study was able to clearly identify the social effects of gambling for a variety of reasons. The amount of high quality and relevant research on social effects is extremely limited. While data on family problems, crime, and suicide are available, tracking systems generally do not collect data on the causes of these incidents, so they cannot be linked to gambling. Sometimes data were available only at the county level, not for Atlantic City. Further, while studies have shown increases in social costs of pathological gamblers, it is difficult to isolate whether gambling is the only factor causing these problems because pathological gamblers often have other behavior disorders. While NGISC and our case study in Atlantic City found some testimonial evidence that gambling, particularly pathological gambling, has resulted in increased family problems (such as domestic violence, child abuse, and divorce), crime, and suicides, NGISC reached no conclusions on whether gambling increased family problems, crime, or suicide for the general population. Similarly, we found no conclusive evidence on whether or not gambling caused increased social problems in Atlantic City.”¹⁴⁵

¹⁴² Interview with Thomas Ambrosino, Mayor of Revere City, MA, Revere City Hall, March 12, 2008.

¹⁴³ Kristol, Irving. “Vice and Virtue in Las Vegas.” Op Ed the Wall Street Journal (September 18, 1973).

¹⁴⁴ Ibid.

¹⁴⁵ U.S. Government Accounting Office, “Impact of Gambling: Economic Effects More Measurable Than Social Effects,” April 2000, p. 3.

Prominent problem-gambling epidemiologist Rachel Volberg, President of Gemini Research in Northampton, MA, also notes that the social impacts of casino gambling are significantly more difficult to objectively analyze and estimate: “The negative impacts of gambling [which chiefly concern the social impacts] typically take much longer to emerge than the positive impacts and they’re also often much harder to measure in terms of quantitative and economic terms.”¹⁴⁶

Evidence exists that casinos – when developed correctly – can advance the public interest by ameliorating some social problems, and by doing so, can reduce dependence on government programs. But, as the following research shows, the likelihood is greater that casinos will reduce dependence throughout the region on various government programs.

The National Opinion Research Center (NORC), at the request of the National Gambling Impact Study Commission, developed a database of social and economic indicators and estimated gaming-related spending in a random sample of 100 communities that had a population base in excess of 10,000. The NORC¹⁴⁷ reported that proximity to a casino was a key factor in various markets, resulting in, among other things: lower unemployment and increased earnings in such key industries as lodging, recreation and construction. Some of the findings are summarized here:

Economic Impact Area	Percent change
Income Maintenance (Welfare) Payments	-13 Percent
Unemployment Insurance	-17 Percent
Other Transfer Payments	-3 Percent
Per Capita Construction Earnings	+18 Percent
Hotel and Lodging Earnings	+44 percent
Recreation & Amusement Industries	+22 Percent

Those are significant changes that have been supported by other reports, including some anecdotal findings. For example, the University of Connecticut’s Center for Economic Analysis issued a report in 2000 that found Foxwoods had created 41,000 jobs in the state since its 1992 opening, and contributed about \$1.2 billion a year to the state’s economy. Foxwoods was also given credit for a \$1.9 billion increase in personal income.¹⁴⁸

Impact on school enrollment and costs

The issue of casinos’ impact on local education is both social and economic, but after our many interviews for this report we made a judgment call and placed this section under the Social Impacts section – although it just as easily could be placed under the Economics Impact section. The placement of this section in the report, however, is insignificant.

¹⁴⁶ Speaking at the “Big Gamble” symposium at Quinnipiac University, March 18, 2008

¹⁴⁷ NGISC

¹⁴⁸ “Study Finds Pequot Businesses Lift Connecticut’s Economy,” New York Times, November 29, 2000

Communities will ultimately have numerous concerns about the impact of a casino on the ability to provide public services. We use education as one example. The question of whether three destination casinos will have a material impact on the costs of providing education to students as well as housing and other costs is dependent on a variety of factors that we simply do not know at this point such as:

- The precise locations of casinos.
- The potential investment in job training and other costs.

The location, for example, would influence factors ranging from the size of the casino to the potential existence of an available workforce, as well as related issues such as the amount of affordable housing, access to mass transit as well as commuting times.

The Town of Middleborough, which conducted a study to determine how a casino might impact their community, determined that it was unlikely to have a substantial impact in overall school enrollment. However, they noted that even a small increase in English Language Learners may require the Town to hire additional staff.¹⁴⁹ The citizen's committee that conducted the study noted in its report:

“The Town of Middleborough provides full day education to its residents at five schools from Kindergarten through Grade 12. Enrollment for the 2006-2007 school year indicated 3,561 students (MA Dept. of Education). Currently there are 5 English Language Learner (ELL) students enrolled in Middleborough (which does not qualify the Town for federal grant funding for ELL professionals).

“We interviewed the superintendents of three host community schools in Ledyard, CT (Foxwoods Casino), Montville, CT (Mohegan Sun Casino) and Mount Pleasant, MI (Soaring Eagle Casino). None of the superintendents interviewed felt their school districts had experienced an “out of the ordinary” enrollment increase due to the presence of the casinos. In fact, the Town of Ledyard's enrollment decreased 4.6% from 1997- 1998 to 2005-2006.

“The Connecticut schools experienced an increase in ELL students. Montville had an increase from 5 ELL students in 1999 to 114 today (out of total of 3,000). This change resulted in the hiring of an ELL Coordinator at an approximate salary of \$70,000. The Ledyard school district has hired several para-professionals to work with ELL students. The Mount Pleasant, MI school district has not seen an increase in ELL students.”

The impact of new jobs on the school districts in the host communities was not significant. It was mentioned that the low availability of rental housing and relatively high rents in the host communities resulted in casino workers living in surrounding communities. A similar situation could develop in the communities surrounding Middleborough.

Ledyard schools host 40 students from reservation land. The district received about \$4,000 from the Bureau of Indian Affairs for each of the 40 tribal children attending their schools, in addition to its state per child payment (similar to our Chapter 70 money). Based on the information from these schools, it appears that the impact to Middleborough Schools would

¹⁴⁹ Middleborough Casino Gambling Study Committee, “Community Impact Analysis and Mitigation of a Casino Resort in the Town of Middleborough, Massachusetts, July 23, 2007. P. 8.

be minimal. While it does not appear that there is a high likelihood of a substantial increase in overall school enrollment, even a small increase in English Language Learners may require the Town to hire additional staff.”¹⁵⁰

The experience of Norwich, CT, a neighbor to the nearby Mohegan Sun casino in Montville, lends credence Middleborough’s supposition. Although the Mayor of Norwich considers the nearby casino a “godsend,” over a six-year period the number of non-English-speaking students in public schools in Norwich quadrupled, from 100 to 400.¹⁵¹ And the Norwich schools are not just educating children. Half the students who study at an adult education center are there to learn the English language and American customs. Of those 600 students, 480 work at the casinos.

Economists Phineas Baxandall and Bruce Sacerdote looked at the possible impact of impact of casinos on education in Massachusetts in the 2005 study. They noted:

“Casinos can affect both the demand for education and the resources available to pay for it. If, for example, casinos attract workers with families, they will create increased demand for—and spending on—schools. And if casinos generate additional revenues for local governments, they could lead to increases in per-capita spending on education. On the other hand, if casinos result in demands for other public services, such as additional policing, or lead to economic declines that reduce tax revenues, education spending (either in total or on a per-capita basis) might lag in counties that introduce casinos. To see how casinos affect local spending on education, we examined data on relative changes in area-level expenditures for education by county, both as totals and in terms of per-pupil spending. To examine changes in total spending between 1987 and 1997, we compare the size of each spending change relative to the absolute level of education spending in that county. To compare changes in per-pupil spending, we divide total spending by the number of pupils. We compare counties that introduced a casino between 1987 and 1997 to those that did not.

“Looking first at total educational spending, we see that the only statistically significant relationship was among counties with large casinos. Introducing these casinos (with over 1,760 slot machines) was associated with an 8 percent greater increase in total school spending compared to other counties between 1987 and 1997. When we examine spending on a per-pupil basis, however, the data indicate that counties which introduced casinos show no statistically significant differences in their rates of education spending compared to other counties in the state. This is true for large-casino counties as well. Looking at the sample of 16 largest recent casino counties, we find that education spending per-pupil increased on average 2 percent faster than state averages for the period as a whole. These results were not statistically significant. Moreover, in half of these counties per-pupil spending increased slower than the state averages; while in the other half of counties, per-pupil spending grew faster. Among our three mega-casino

¹⁵⁰ Ibid.

¹⁵¹ Stephanie Vost, “Casinos bring jobs - and a strain on schools - to ailing Norwich,” Cape Cod Times, July 23, 2007

counties, per pupil spending grew 6 percent slower than the state average in San Diego County.”¹⁵²

In its analysis of the impacts of casino gambling for the Greater Boston Chamber of Commerce, UHY looked at the impact on school enrollment and costs and concluded:

“Local education resources may be impacted with casino developments. Depending on the number and ethnicity of workers who migrate from out of the area, schools may have to address issues such as additional space requirements, language barriers and special needs students. These concerns cannot be addressed until the casino is actually developed and the actual impact known.”¹⁵³

We concur with UHY’s cautionary note, and emphasize that the direct impacts can be better analyzed once locations and project scope are more clearly known.

For this study, we assume about 20,000 direct, indirect and induced employment positions to be generated by three properties spread throughout the Commonwealth, in keeping with the projected estimates as outlined earlier.

Over the years, Spectrum has studied numerous gaming markets, as well as interviewed third-parties, and we suggest there is a well-established link in this industry between where people work and where they live or would want to live. Other things being equal, people tend to want either to minimize their commute time or at least to keep it within certain limits. In a service industry like casinos, it is especially important that workers arrive on time regardless of the weather or other circumstances; so casino workers would tend to be especially sensitive to issues of commute time and distances between home and work and also between work and their children’s schools.

Additionally, if casino employees are either recent immigrants or have lower household incomes when they start their careers, they would face higher transportation costs as many would not own cars.

In the case of the Atlantic City casinos, approximately 25 percent of the casino employees live within Atlantic City, while 84 percent of casino workers chose to live within Atlantic County.¹⁵⁴

Spectrum reviewed a 2003 report titled “Employment Effects of Casino Gambling in the Eighth District,” prepared by the Federal Reserve Bank of St. Louis. It found that the percent of casino employees residing in the host county ranged from a low of 30 percent to a high of 80 percent.¹⁵⁵ Additionally, it is common throughout the casino industry that many households will have two or more adults who are holding one of these jobs.

¹⁵² Phineas Baxandall and Bruce Sacerdote The Casino Gamble in Massachusetts: Full Report and Appendices; Release date: January 13, 2005 Rappaport Institute for Greater Boston, John F. Kennedy School of Economics, Harvard University. P. 10.

¹⁵³ UHY Advisors, “Casino Gaming in Massachusetts: An Economic, Fiscal and Social Analysis,” Commissioned by the Greater Boston Chamber of Commerce, March, 2008, p. 104.

¹⁵⁴ The New Jersey Casino Control Commission, as of April 2008

¹⁵⁵ Although this study was performed before Pinnacle Entertainment opened Lumiere Place in St. Louis, we do not anticipate it would have had a material impact on this percentage.

This pattern may be more common for unmarried casino workers who may choose to live together for any number of reasons including common background, to facilitate commuting, etc. For this section of the analysis, we are assuming there will be an average of 1.2 casino workers per household. That is, on average, for every five households, one would include two casino workers.

A few households may have more than two casino jobs, but the average would still be 1.2. We consider this 1.2 estimate to be, if anything, on the high side, and it was chosen to maintain the essentially conservative nature of our forecast of casino impacts.

If we assume that all of the 20,000 employees are new to their respective areas (highly unlikely), and if we assume that half of those employees have school-age children,¹⁵⁶ we then anticipate that there will be some 8,334 households (20,000 divided by 1.2 casino jobs per household, divided in half) that have school-age children.

If each of those households has 1.5 school-age children, it would generate new enrollment of as much as 12,500 children. That outcome is not likely, however, as it assumes that all casino employees and all the jobs that they help generate throughout the local economies of Massachusetts are new residents. It is, of course, assumed that many of the new casino jobs will be filled by current Massachusetts residents whose children presumably are already in the public school system, and thus should not be counted as part of the casino impact on the area schools.

If these current residents were holding jobs, and they simply transferred to a casino job, then one would need to assume that, at least in a strong economy, these jobs will be back-filled and that eventually new residents will need to move into the casino region to fill these vacated jobs.

Additionally, we assume that 90 percent¹⁵⁷ of the students will be in public school, with the rest in private or parochial schools. With those factors in mind, the creation of three destination casinos would likely increase school enrollment throughout the Commonwealth by a small amount, but to some communities a meaningful amount.

That relatively small number could be material if many of those families are concentrated in a few communities that, as a result, require greater capital investment in new schools. This would be more easily managed if, say, the communities that absorb new residents are also the host communities for the casinos, since the casino itself would generate significant property taxes. That would not necessarily be the case, however.

The situation in Monson

Monson is a rural, residential town (8,359) in western Massachusetts – in many ways a typical small town in the state. Its school district had a school enrollment of 1,525 for the 2007-08 school year. It spent \$14.4 million to educate its students, or \$9,075 per pupil. Of that amount, 36 percent came from Monson taxpayers and 64 percent came from state aid.

¹⁵⁶ “Wages and Healthcare Benefits of Workers at Aqua Caliente Casino,” Eric Nilsson, et. al., March 2003. This report suggested that 46 percent of casino workers have children.

¹⁵⁷ This is in keeping with national estimates: <http://www.census.gov/prod/2007pubs/08statab/educ.pdf>

Town leaders said they fear that a major casino resort built near Monson would cause the student population to swell from casino-employee families seeking to live close to their employer. Each non-special education student that enters Monson Public Schools would inflate the district's budget by \$9,075. The amount could be higher if the surge included students who required special education or English language learners (ELL); there currently are no ELLs in Monson Public Schools. (We note that many of the families that are attracted to a region because it offers casino employment come from non-English speaking cultures. This often requires a concomitant investment in unanticipated programs such as teaching English as a second language.)

Further, the Monson elementary and middle school populations are “near capacity” and the high school is at more than 85 percent capacity.¹⁵⁸ School transportation, which is funded locally, is another costly concern, according to Kathleen Conley Norbut, a Monson Selectman and Chairman of the town's Local Casino Study Committee. “Additional buses and fuel to service additional routes and students without state assistance is untenable,” she said.¹⁵⁹ The school district already assesses students in grades 7-12 \$1 per day, or \$180 per year, to ride the school bus.

With an average single-family property tax bill in the town of \$2,825 for fiscal year 2008, town leaders say they would be forced to raise property taxes – perhaps dramatically – to adequately fund a surge in school enrollment. Most of that burden would fall on the residents, as residential property taxes account for 93 percent of the town's annual tax receipts.

Norbut noted that in other nearby towns, such as Brimfield, Holland and Wales, residents account for closer to 100 percent of the local-tax burden.

We recognize that even small changes in school enrollment in small communities can have a significant impact on school budgets. The Commonwealth must be prepared to offer financial assistance to such communities from mitigation programs, irrespective of the size of such impacts.

Montville, CT, schools are struggling to cope with a huge influx of Chinese students who are not proficient in English. The number of English Language Learners or ELLs has increased from 13 to 133 since 2000.¹⁶⁰ The district has had to hire a full-time coordinator to operate an expanded program. Montville is where the Mohegan Sun casino is located. Other school districts in southeastern Connecticut have also experienced a marked increase in the number of ELL students.

However, we strongly suggest that public policy with respect to gaming should take meaningful steps, as detailed elsewhere in this report, to reduce the ranks of unemployed and unemployable adults by targeting them for training. At the same, casinos should be sited in areas that provide easy access for this potential workforce. Indeed, a policy of focusing on existing residents in need of employment would advance public policy on several fronts, including limiting the need for additional funding of government services. Access and training should be important criteria in weighing any application.

¹⁵⁸ Letter from Kathleen Conley Norbut, Monson Selectman and Chairman of Local Casino Study Committee, June 17, 2008

¹⁵⁹ Ibid.

¹⁶⁰ Interview with Montville schools ELL coordinator, May 1, 2008

Crime

Does casino gambling lead to increased crime?¹⁶¹ This is a question of paramount concern to both proponents and opponents of casino gambling. No one wants to make their community less safe and hospitable. During an interview with representatives of the Massachusetts District Attorneys Association, (MDAA), District Attorney Michael D. O’Keefe expressed a view that is commonly held in the law enforcement community. Although he believes that any initiative that increases the number of tourists in a given area will also result in an increase in crime, casinos are more prone to criminal activity.¹⁶²

It is important to note that the MDAA does not take a formal position on the administration’s proposal. However, in evaluating the proposal, the MDAA believes it is essential to bear in mind the broad range of mandated responsibilities already imposed upon district attorneys. The MDAA does not want new casino development to impose another unfunded mandate upon local district attorneys who already have limited resources. They believe that it is incumbent upon the proponents of the Governor’s proposal to anticipate and properly plan for the impacts of resort casinos and that those who may undertake this initiative understand that casino revenues will be offset by higher law enforcement costs. They also recommend that any state funding for crime mitigation be based on actual need and not allocated according to a preset amount.¹⁶³

The compact negotiated between Connecticut and the two Indian tribes, as described, stipulates that the casinos pay for the cost of a State Police presence.¹⁶⁴ The state troopers investigate all casino crimes that occur on the casino floor just as the New Jersey State Police does in New Jersey. But Connecticut failed to provide for any funding for the prosecution of those crimes. The State’s Attorney in New London County currently absorbs all of those costs.

The 2004 Uniform Crime Report¹⁶⁵ shows that Foxwoods had 378 larcenies. Twenty-six of them resulted in convictions. At Mohegan Sun, there were 113 larcenies. Thirty-four of them resulted in convictions. There were also three aggravated assault convictions and a robbery conviction as well at Mohegan Sun. Prosecutors in New London County told us that they expend considerable resources each year prosecuting casino floor crimes.

¹⁶¹ In this analytical context crime refers to reportable offenses included in the FBI Uniform Crime Reporting program. These offenses include: murder and non-negligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny and motor vehicle theft. Arson is also included although it is generally not included in studies of the effects of casino gambling and crime. Not all crimes, such as embezzlement, are readily brought to the attention of the police. Also, some serious crimes, such as kidnapping, occur infrequently. Therefore, the UCR Program limits the reporting of offenses to the eight selected crime classifications because they are the crimes most likely to be reported and most likely to occur with sufficient frequency to provide an adequate basis for comparison. <http://www.fbi.gov/ucr/ucrquest.htm>

¹⁶² Interview with Interview with the Massachusetts District Attorneys Association, Boston, MA, March 12, 2008, In attendance were: Geline W. Williams, Executive Director, Michael D. O’Keefe, District Attorney, Timothy J. Cruz, District Attorney, David Capeless, District Attorney, by Telephone.

¹⁶³ Ibid. Interview with Interview with the Massachusetts District Attorneys Association, March 12, 2008

¹⁶⁴ Various interviews with Connecticut casino executives and law-enforcement officials

¹⁶⁵ Connecticut State Police 2004 Uniform Crime Report

There would clearly be an impact on taxpayers in Massachusetts if district attorneys were expected to be responsible for the prosecution of casino floor crime without any special funding, as is done in Connecticut.

The MDAA also expressed the opinion that the social impacts of a casino resort would be greater on rural communities who have neither the experience nor infrastructure to deal with the magnitude and broad range of issues that will accompany a large scale casino development.

The MDAA cited a recent study by economists Earl L. Grinols and David B. Mustard which purports to show a more definitive link between casino gambling and crime.¹⁶⁶ That report will be discussed in more detail later in this report.

Similar concerns regarding the relationship between casino gambling and crime were also expressed by Thomas J. Foley, a retired, former head of the Massachusetts State Police and member of the Governor's Council, who tracked crime statistics around the country as part of his duties. Although Foley stated that he had not taken a position for or against the Governor's proposal, he believes that if the state were to permit casinos, it should be prepared to fend off unwanted criminal activity. Foley noted that "location is critical in curtailing the crime impacts from casinos." He attributes the success of casino resorts such as Foxwoods or Mohegan Sun to their rural setting. "Once you put these types of facilities in an urban setting it makes for more of an opportunity for other kinds of crimes and individuals to start coming into the area."¹⁶⁷

As for the connection between crime and gambling, the Attorney General of the State of Maryland was more strident and to the point when the matter was before his state. In a report that thoroughly catalogued statistical studies as well as anecdotal impressions on the relationship between gambling and crime, he concluded, "It is simply a fiction to delude ourselves that it is possible to have casinos without more crime. ... Casinos would bring increases in every area of criminal activity."¹⁶⁸

The views of those in law enforcement rank highly in assessing this matter since they are the ones on the frontlines. There does appear to be prima facie evidence to support a connection between crime and gambling. Crime does tend to correlate positively with casino gambling. However, policy analysis requires that a causal relationship be analyzed and established as well as a correlation. Understanding the distinction between the two is critical. A lighthearted way to illustrate this point is to note that there is a high correlation between people who have ridden in an ambulance arriving at hospital emergency rooms with life-threatening illnesses and injuries. However, one would be grossly mistaken to conclude that riding in an ambulance was the cause of those illnesses and injuries.

¹⁶⁶ The Journal of Economics and Statistics, "Casinos, Crime and Community Costs," Earl L. Grinols and David B. Mustard, February 2006, 88(1): 28-45. This report was also cited in a Massachusetts District Attorneys Association handout.

¹⁶⁷ John J. Monahan, "Ex Cop Lists Casino Faults: Crime May Follow Gambling," Worcester Telegram and Gazette On Line Edition, Worcester Massachusetts, March 16, 2008.

¹⁶⁸ Report of the Attorney General J. Joseph Curran, Jr. on the Impact of Casino Gaming on Crime, Presented to the Joint Executive-Legislative Task Force to Study Commercial Gaming Activities in Maryland, October 16, 1995, p. E-2. Similarly, see also a Sullivan County New York focused study, Constantine & Aborn Advisory Services, Gambling: Who's really at risk? The connection between gambling and crime, May 19, 2005.

The question then is whether casino gambling per se causes more crime or the increase in the number of tourists and visitors (visitation) who come as a result of these new attractions results in more crime.

The Pennsylvania example is illustrative. In Pennsylvania, where slots-only casinos have been opening at various points throughout the state over the past two years, 967 crimes were reported at six properties that were open in 2007. Of those, more than half – 567 – were thefts. Law enforcement personnel in Pennsylvania have characterized most of those as “crimes of opportunity.” “We may have had a handful where somebody has tried to grab a ticket from somebody,” Capt. Tim Allue, supervisor of the State Police gaming-enforcement unit, told reporters recently. In most cases, the owner of a purse or a ticket – which is bar-coded with a specific dollar value and is effectively currency – loses track, and someone else appropriates the purse or ticket, according to Allue¹⁶⁹.

Three months after the Hollywood Casino at Penn National opened this year, local police reported no significant increase in crime. “Most of them (are) very minor in nature. In fact, probably all of them minor in nature -- a few public drunkenness, criminal mischief, theft -- things like that. We're very pleased with the way things are going right now,” said Pennsylvania State Trooper Karl Schmidhammer.¹⁷⁰

Spectrum Gaming Group and its principals have studied this issue from many different approaches over a span of nearly three decades, as former law-enforcement officials and regulators, as historians, journalists, public officials, casino operators and – perhaps most importantly – as residents of a gaming community.

We have examined the statistical data carefully and have developed our own quantitative and qualitative studies. Our experience has led us to determine that the following guidelines must be applied if this subject is to be properly analyzed:

- Casino-related crime must not be confused with crime that might be related to increased economic activity.
- Visitor population must be taken into account when analyzing data.
- To the extent possible, factors such as the urban or rural nature of a community must be considered in the analysis.

In his aforementioned comments, Foley lends credence to the latter point when he mentions how a casino’s location may be a factor when it comes to crime. In many communities such as Atlantic City, Detroit, Gary, IN, or parts of Philadelphia, the nature of crime and the crime rate itself are often related to pockets of embedded poverty. Such problems preceded the arrival of casinos and, in some instances, gaming was introduced as part of a solution to address social dysfunctions that are believed to cause crime.

The scholarly literature that examines the relationship between gambling and crime has been somewhat contradictory or inconclusive in its findings. A 2005 study by Phineas Baxandall and Bruce Sacerdote is illustrative of this. These two economists analyzed the concerns of those

¹⁶⁹ “Casino's biggest crime: thefts,” by Sharon Smith, *The Patriot-News*, June 2, 2008,

¹⁷⁰ “No Increase In Crime Since Casino Opened, Operators Say,” *WGAL-TV*, May 14, 2008

who wondered what spinoffs casino gambling in Massachusetts might produce.¹⁷¹ Their analysis, which compares the experience of counties in the United States that host casinos with those that do not, suggests that both sides in this debate are wrong. What they conclude may be dissatisfying to those who want a more definitive answer to the questions at hand:

“For over a decade, advocates and opponents of casinos in the Commonwealth have argued about whether legalized gambling would produce prosperity or ruin. Our analysis indicates that at the county level - where any positive or negative effects are likely to be concentrated – casinos would have only relatively minor effects. On the positive side, they may create more jobs and they are likely to attract more residents as well. However, since the increases in jobs and population are about equal, jobless rates are not likely to change dramatically in areas with new casinos. On the negative side, total crime may increase, but the increase appears to be due solely to the increase in population. Bankruptcies are likely to rise in counties with casinos but the total number of people affected by the increase is relatively small. Perhaps most surprising is that casinos appear to have little or no effect on home values (at least in populous counties) or on total spending for either policing or roads. ... These findings do not mean that casino gambling is a trivial issue – only that employment, finances, and crime are insufficient rationales for deciding whether to deny or allow casinos in Massachusetts. Policymakers, therefore, must consider other issues when deciding whether to allow casino gambling in the state. These might include questions such as whether (and how) casinos would alter the Commonwealth’s character, whether it is problematic to rely on gaming revenues to fund public services; and whether allowing limited casino gambling will compromise the state’s ability to control gambling in the future.”¹⁷²

A recent study prepared for the Greater Boston Chamber of Commerce by UHY Advisors also notes the difficulties of accurately measuring the social impacts of gaming:¹⁷³

“The effect and impact the legalization of casinos has on society is difficult to measure. Unlike counting the number of jobs created or tax dollars generated, many of the costs to society are less tangible. Therefore, the results of the various studies focused on the societal costs of gambling should be view with some appreciation of the limitations to this type of research.”¹⁷⁴

The Chamber study goes on to note other limitations such as:

- Measurements of the effects of new styles of gambling cannot adequately take into account the effects of gambling opportunities in the period before legalization.

¹⁷¹ Phineas Baxandall and Bruce Sacerdote *The Casino Gamble in Massachusetts: Full Report and Appendices*; Release date: January 13, 2005 Rappaport Institute for Greater Boston, John F. Kennedy School of Economics, Harvard University.

¹⁷² *Ibid.* p.

¹⁷³ UHY Advisors, “Casino Gaming in Massachusetts: An Economic, Fiscal and Social Analysis,” Commissioned by the Greater Boston Chamber of Commerce, March, 2008, pp. 87 - 96.

¹⁷⁴ *Ibid.* p. 87.

- Given the increasing variety of forms of gambling that are increasingly readily accessible such as lotteries, race or sports betting, Internet gambling, etc., it becomes more difficult to strictly attribute the adverse impacts of gambling to any one type of gaming activity.¹⁷⁵

The Greater Boston Chamber of Commerce, according to its president, Paul Guzzi, does not take a position on the proposed legislation. The chamber's intention in commissioning this study was to take a fact-based look at the economic and socio-economic impacts of casino gaming. He stated that unintended consequences resulting from the proposal is a legitimate area of concern and should be taken into consideration.¹⁷⁶

The Baxandall and Sacerdote study and the Chamber study illustrate the limitations of a quantitative analysis of the impact of gambling. Such analyses have methodological restraints as well as problems in clarifying causation that do not provide definitive answers.

Spectrum's review of the literature identifies two ways in which these limitations may cause one to draw premature or inappropriate conclusions which often overstate the crime related impacts of gambling on crime rates:

- Since the standard reporting of crime rates are based on incidents per 100,000 people, such studies are inherently flawed in communities with a significant hospitality industry that attracts a large number of tourists on a daily basis. The studies are routinely based on resident population, rather than on residents plus visitors.
- Not surprisingly, some types of crimes can increase as a result of more money in a community (economic activity) or more people, (social activity). In a gambling environment both results are inevitable. Thus, gaming is viewed as the proximate cause of any increases in crime when the underlying cause is often increased economic and social activity.

Authoritative analysis therefore requires that the existing socio-economic characteristics of a community must be taken into account when assessing any link between gambling and crime. As mentioned earlier, this point was raised during the interview with the MDAA, where the opinion was expressed that the social impacts of a casino resort might be greater on rural communities. The reason is the perception such communities are less apt to have either the necessary experience or infrastructure, both social and physical, to properly cope with the broad range of issues that will accompany a large scale casino development.¹⁷⁷ A similar view was expressed by Marc D. Draisen, executive director of the Metropolitan Area Planning Council, in an op-ed article in the *Boston Globe*. Draisen noted, "... localities often fail to negotiate the best deal. Smaller towns lack the professional staff to evaluate the true impacts of development. Desperate for cash now, they often forgo longer-term benefits for short-term payments."¹⁷⁸

¹⁷⁵ Ibid. p. 88.

¹⁷⁶ Interview with Paul Guzzi, President and CEO, Greater Boston Chamber and Jim Klocke, Executive Vice President, Boston MA, March 13, 2008.

¹⁷⁷ Ibid. Interview with Interview with the Massachusetts District Attorneys Association, March 12, 2008

¹⁷⁸ Marc D. Draisen, "Gambling on our Future," Op Ed, The Boston Globe On Line. August 4, 2007. Assessed March 24, 2008.

What also must be considered is the data that suggest that when casinos have served as an economic catalyst for a local community, they reduced some degree of the poverty-related crime problems as well as demands on social services.

Several explanations and theories have been offered to explain any nexus between casinos and crime. The simplest and most straight forward is what some call the Willie Sutton theory, named after the famous bank robber who supposedly answered a reporter inquiring why he robbed banks by saying “because that's where the money is.”¹⁷⁹ In other words, casinos attract large numbers of visitors who carry large amounts of cash. These individuals become tempting targets for the criminal element.

A more serious explanation posits that gambling increases criminal activity because it is has a strong attraction to individuals who have certain types of addictive disorders and mental illnesses, and as a result, are more prone to commit crimes. For example, problem gamblers soon use up their personal resources and have to turn to illegal activities in order to fund their habit.

Numerous academics, journalists and public officials have attempted to reach conclusive results about the relationship between crime and casinos, and appear to have fallen short. This is largely because communities can be so different in their demographics as well as values, norms, priorities, histories, traditions and attitudes concerning gambling. This diversity of opinion is further compounded when one looks at the multitude of variables that could conceivably impact on crime in a community.

In 1999, the National Gambling Impact Study Commission, more conservative than the 1976 federal commission¹⁸⁰ that preceded it, examined how the proliferation of gambling was affecting the fabric of America.¹⁸¹ The Commission noted the contradictory conclusions regarding how gambling may increase crime in a community. According to the Commission:

“Since the types of crime involved in each of these hypotheses are different, it is not surprising that the proponents of both views are able to advance research to support their views. The reliability of these studies however, is questionable.”¹⁸²

Based on testimony and a review of the literature, the commission reached a simple and straightforward conclusion:

“Taken as a whole, the literature shows that communities with casinos are just as safe as communities that do not have casinos.”¹⁸³

A more recent study, the one referenced by the MDAA, was done by two economists who have extensively studied the impacts of gambling. It purports to have established a connection between casino gambling and crime. Their study, published in *The Review of Economics and Statistics*, examined the relationship between casinos and crime using county-

¹⁷⁹ Where the Money Was: The Memoirs of a Bank Robber (Viking Press, New York, 1976)

¹⁸⁰ Commission on the review of the National Policy Toward Gambling, *Gambling in America, Final Report* (Washington, D.C.: U.S. Government Printing Office, 1976.

¹⁸¹ National Gambling Impact Study Commission Final Report, June, 1999.

¹⁸² Ibid. p. 7-12.

¹⁸³ Ibid. p. 7-14.

level data for the United States between 1977 and 1996.¹⁸⁴ They find that most factors that reduce crime occur before or shortly after a casino opens. However, factors that increase crime, including problem and pathological gambling, occur over time. They conclude that the effect on crime is low shortly after a casino opens, and grows over time:

“The crime-ameliorating effects of casinos through increased employment opportunities and wages for low skilled people will be concentrated shortly after opening. Also law enforcement agencies can frequently use casino openings to leverage greater immediate staffing increases, but are unable to sustain this growth. This effect further reduces the immediate impact of casinos on crime. However, over time these effects are dominated by casino-related factors that increase crime. Specifically, problem and pathological gamblers commit crimes as they deplete their resources, non residents who visit casinos may both commit and be victims of crime, and casino induced changes in the population start small but grow. The data show that these crime inducing and crime mitigating effects off set each other shortly after opening, but over time the crime-raising effects dominate and crime increases in subsequent years.”¹⁸⁵

Although Grinols and Mustard regard their study as the “...most exhaustive in terms of the regions examined, the years covered, and the control variables used,”¹⁸⁶ they are not without their critics. Douglas M. Walker, an associate professor of economics at the College of Charleston is one.¹⁸⁷ He is author of *The Economics of Casino Gambling*¹⁸⁸ and has written extensively on the impacts of gambling.¹⁸⁹ Walker deemed their results invalid due to “...a variety of serious problems in their data and analysis.”¹⁹⁰ More specifically, Walker faulted them for not adequately addressing the seemingly irreconcilable issue of causation:

“The authors simply compared casino to non-casino counties. But they did not control for the volume of tourists, so the crime effect they found may have been caused by tourism generally rather than casino tourism specifically. To show a valid link between crime and casinos, the authors would have needed to compare casino counties to other counties with non-casino tourism.”¹⁹¹

Walker states that few, if any, of the researchers whom Grinols and Mustard cite acknowledge this issue or properly consider it when formulating their conclusions. The result is an overstatement of the social costs of gambling.¹⁹² The Grinols and Mustard study, according to Walker:

¹⁸⁴ Ibid. Grinols and Mustard.

¹⁸⁵ Ibid. p. 44.

¹⁸⁶ Ibid. P. 43.

¹⁸⁷ Walker is a significant contributor to this report, working as a subcontractor to Spectrum Gaming Group

¹⁸⁸ Douglas M. Walker *The Economics of Casino Gambling* Springer, New York, 2007

¹⁸⁹ See also Douglas M. Walker, Problems in Quantifying the Social Costs and Benefits of Gambling, *American Journal of Economics and Sociology* 66(3) pp. 609 – 645.

¹⁹⁰ Douglas M. Walker, American Gaming Association 10th Anniversary White Paper Series, “Challenges that Confront Researchers on Estimating the Social Costs of Gambling,” January 2008. p. 8.

¹⁹¹ Ibid.

¹⁹² Ibid. p. 9.

- Did not account for visitors in calculating the crime rate.
- Did not distinguish between visitor and resident victims.
- Did not distinguish between on-premises and off-premises crimes.
- Use a changing sample of casino counties on which to base their claim that there is a “rising trend” in crime rates several years following the introduction of casinos.

It is especially noteworthy that they do not adjust for visitors, and they cannot distinguish between casino crime and tourism crime, as is already noted in the report. Additionally, we note that their measure is not sensitive to the amount of gambling, the size of casinos, etc. So the study treats Clark County, NV, the same as a county in another state that has a single, tiny casino. Both would be counted as having casinos, with no distinction between their market sizes.

For a more relevant assessment of the link between casinos and crime, Walker cites the work of B. Grant Stitt, Mark Nichols and David Giacomassi. They compared the crime rates of six new casino communities to the rates found in six non-casino control communities. The communities were matched on 15 socioeconomic variables. Conventional thinking was that crime would be expected to rise in the casino communities, consistent with the belief that casinos serve as magnets for crime. Instead, the effects of casinos on crime appear to be related to a variety of poorly understood variables. In some casino communities crime rates rose significantly, in some they remained relatively stable, and in others it decreased. However, their analysis yielded few consistent findings. Their conclusion is worth noting in its entirety:

“The fact that the [research] results are mixed suggests that there may be some contextual factors operating in some communities that allow for casinos to positively affect crime under certain, as yet unknown, circumstances. At the same time there is no way of knowing whether the apparent casino effect, when present, is a direct one.

“When a casino opens in a community, it often changes the nature of the community in a multitude of ways, both positively (e.g., stimulating the economy and adding employment and entertainment options) and negatively (e.g., adding traffic congestion, altering traditional patterns of interaction, and introducing large numbers of nonresidents into a community). The interplay of these and other factors (location, size, and number of casinos; state gaming regulations; law enforcement policies; etc.) vary by jurisdiction and may well determine the effect of the casino on crime in the community. Finally, in those instances where crimes have increased suggesting a possible casino effect, it will be very difficult to determine if the increase is due to casino-related factors or increased tourism, which has been linked to increases in crime in other studies. Clearly more research is needed to clarify the relationship of casinos to crime. At this point, however, it can be concluded that comparing multiple jurisdictions where casino gambling has been introduced and comparing them to matched control jurisdictions reveals that crime does not appear to be an inevitable or necessary product of casino presence.”¹⁹³

¹⁹³ Crime & Delinquency, Vol. 49, No. 2, 253-284 “Does the Presence of Casinos Increase Crime? An Examination of Casino and Control Communities,” by B. Grant Stitt, Mark Nichols, David Giacomassi, (2003)

Two Ohio University researchers, William J. Miller and Martin D. Swartz, who studied the relationship between casino gambling and street crime, recognized the need to account for the effects of increased tourism in their 1999 study. They concluded:

“We have not found here any compelling evidence to suggest that there is something unique about casinos that cause an increase in street crime in the surrounding area. Of course, with increased people traffic, it is entirely likely that raw numbers of crime will go up. With tourists walking around with large amounts of money and expensive equipment, often vulnerable because of alcohol and their behavior, it should not be surprising that more crimes will be committed. Most important of all, if large numbers of new hotel and motel rooms are built, particularly if little security is provided and it becomes known that people are leaving valuables (jewelry, cameras, winnings) in these rooms, then an increase in burglary should not be unexpected... So far there is no reason to believe that gambling casinos are different from any other tourist attraction in this regard.”¹⁹⁴

The experience in the state of Connecticut further illustrates the vague and ambiguous relationship between casino gambling and crime. The following chart from a 2000 report by the Connecticut Center for Economic Analysis at the University of Connecticut shows changes in the crime rate in the town of Ledyard, CT, following the 1993 opening of Foxwoods.

	In-casino crime	Out-of-casino crime	Total crimes
1990	-	-	214
1991	-	-	214
1992	-	-	283
1993	496	535	1,031
1994	1,212	573	1,785
1995	1,231	542	1,773
1996	828	523	1,351
1997	757	541	1,298
1998	989	364	1,353

Source: Connecticut Division of State Police

A casual reading of this data would likely lead to the conclusion that Foxwoods was the proximate cause of significantly increased crime in the Ledyard area. In reviewing this data, the authors of the University of Connecticut report analyzed the data in a broader perspective, writing:

“Public opposition to the spread of casino gaming has been driven mainly by fears of adverse social impacts. Some examples are neighborhood crime issues linked to casinos, such as robberies, larceny, loan sharking, and drug dealing. A study covering 1990 to 1998 (The Connecticut Economy, Summer 1999) shows that over these years the crime rate decreased statewide by 29.7 percent. In the New London Labor Market Area alone it has declined by 10.8 percent. According to the study, the crime rate in Ledyard has

¹⁹⁴ William J. Miller and Martin D. Swartz, “Casino Gambling and Street Crime,” *The ANNALS of the American Academy of Political and Social Science*, Vol. 556, No. 1, p. 135. (1998)

increased by more than 300 percent. However, if we disaggregate the total crime in the Town of Ledyard as ‘in casino’ and ‘out of casino’ crimes, then it is true that crime in Ledyard per thousand people has increased by only 70 percent. In North Stonington the crime rate has increased by 14 percent and in Preston it decreased by 31 percent measured as crimes per thousand people. ...

“However, considering ‘out of casino’ crimes only, the effect of Foxwoods Resort Casino on crime in the area is minimal. The statistics for crimes (as shown in the data provided by the Department of Public Safety) in the years 1990 to 1992 does not take into account Part II crimes, such as ‘disorderly conduct’, ‘driving under the influence’, ‘runaways’ and ‘vandalism’, which contribute approximately 50 percent of the crimes committed in the three towns from 1993 to 1998. In fact, the abrupt jump in number of crimes from the year 1992 to 1993 is mainly due to the addition of Part II crimes described above. Thus, crime estimates as given by the Department of Public Safety for these years are biased downwards. *In fact, the total number of ‘out of casino’ crimes in Ledyard declined from 535 in 1993 to 364 in 1998. ‘In casino’ crimes also show a decline from 1,212 in 1994 to 989 in 1998 with 60 percent of them being larceny.*”¹⁹⁵ (Emphasis added)

The Connecticut State Police is an agency charged with policing both the interior and exterior of Foxwoods and the state’s other casino, the neighboring Mohegan Sun. According to Sgt. J. Paul Vance, the State Police does find that the activity of casino gaming is responsible for an increase in crime. “Certainly there is some crime that does occur due to the sheer volume of people that frequent both facilities – from petty larceny to assaults – but we would expect that with any large venue.” Vance added, “The other side of the coin is that they are gaming facilities, which involve people carrying cash in or away from those facilities. We recognize there may be certain preys [sic] attempting to prey on these folks to relieve them of their funds.”¹⁹⁶

As we have shown, the social science literature is contradictory and inconclusive and does not help to clarify the relationship between gambling and crime. Spectrum Gaming Group believes that the Atlantic City experience, which is often cited negatively in the Massachusetts gambling debate, may help to provide one with a better understanding of the uncertain nature of this issue.

Atlantic City is a region with which Spectrum Gaming Group is intimately familiar, having worked in it for nearly three decades. We have analyzed the available data, and suggest that multiple factors must be taken into account when examining this sensitive issue.

There are several reasons why Atlantic City is relevant to this debate:

- Atlantic City is indeed a classic example of a community with a lopsided ratio of visitors to residents. According to the South Jersey Transportation Authority, 33.3 million people visited Atlantic City in 2007,¹⁹⁷ which, according to the U.S. Census

¹⁹⁵ “The Economic Impact of the Mashantucket Pequot Tribal Nation Operations on Connecticut,” By Fred Carstensen, William Lott, Stan McMillen, Bobur Alimov, Na Li Dawson, Tapas Ray, November 28, 2000, Connecticut Center For Economic Analysis, University of Connecticut.

¹⁹⁶ Interview conducted by Spectrum Gaming Group September 8, 2005

¹⁹⁷ South Jersey Transportation Authority Website Press Release 33.3 Million Trip Visits to Atlantic City in 2007 March 26, 2008 www.sjta.com.

has a permanent population of only 40,385 residents. In previous years, the number of visitors reached approximately 35 million.

- Casinos are a dominant part of the tourism industry in the Atlantic City area, but they are not the entire industry. Nor are casinos the sole attractions. The city's convention facilities are among the largest and most modern in the nation. During warmer months, millions converge on the region to enjoy its beaches, dining opportunities, shopping and seashore attractions. Other communities in the region, such as nearby Cape May in the south, have their own unique and historic attractions. Collectively, these communities further swell the ratio of visitors to year-round residents.
- Atlantic City is an older urban center, prone to many of the same socio-economic problems that plague other such cities.
- Atlantic City is a small community, not just in population but in total area. It is 48 blocks long, hardly a neighborhood in some bigger cities. The Atlantic City region, on the other hand, encompasses two entire counties, and includes vast stretches of rural and agricultural land, as well as suburban communities.

The latter two points are critically important to any understanding of data coming from Atlantic City.

In 1976, New Jersey voters approved a constitutional amendment and legalized casino gaming “as a unique tool of urban redevelopment for Atlantic City.”¹⁹⁸ At that time, the city was arguably was one of the worst suffering urban centers in the United States. Its unemployment rate reached 40 percent in the winter and it had the third-highest concentration of public housing in the nation. It had effectively lost its tourism industry and was plagued by seemingly intractable problems tied to urban poverty, from drugs to gang violence to street crime to teenage pregnancy¹⁹⁹.

Casino gambling provided a means to address many of these problems. However, many of these problems are not unique to Atlantic City. They are national in scope and endemic to older urban areas. Their lingering presence today cannot be linked to any causal relationship with casinos. They are part of the current fabric of urban America. Many who are familiar with Atlantic City's pre casino era believe these problems would be far worse in the absence of the city's casino industry.

In Atlantic City, the relationship between casinos and crime remains unclear and subject to different feasible explanations. How much of it is due to an entrenched underclass, or to the exorbitant number of visitors who go there or to the very nature of gambling?

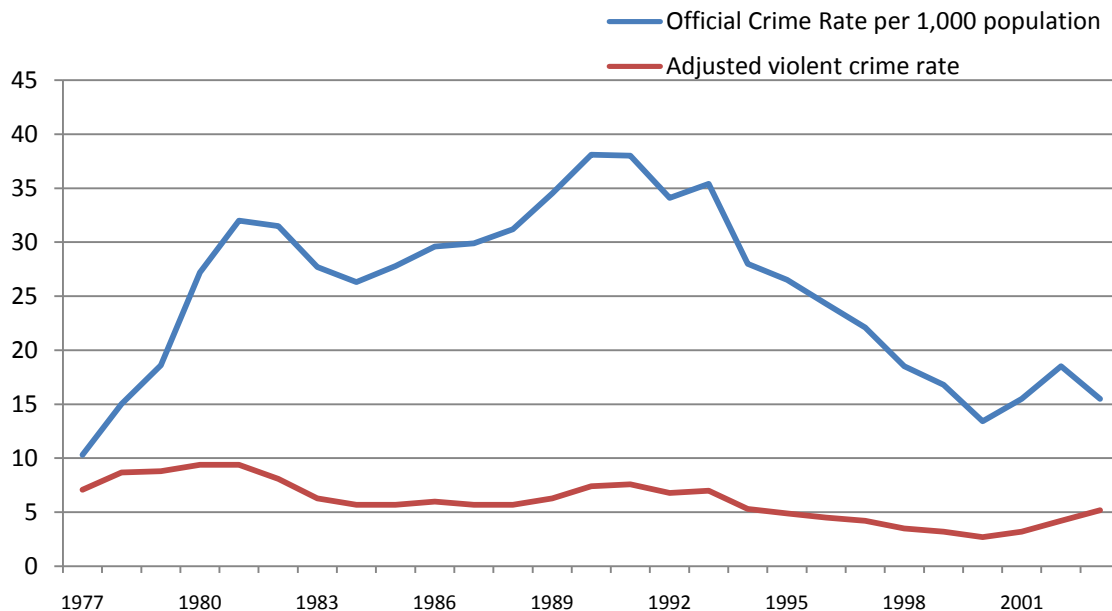
The New Jersey Casino Control Commission, in a report to the 1999 National Gambling Impact Study Commission, looked at Atlantic County's crime statistics and concluded that if the daily non resident population of Atlantic City was taken into account, Atlantic City was safer

¹⁹⁸ N.J.S.A. 5:12-1 b.(4).

¹⁹⁹ “Hostage to Fortune: Atlantic City and Casino Gambling,” 1987, Center for Analysis of Public Issues, Princeton, NJ

than it is was before the first casino opened nearly 20 years earlier.²⁰⁰ This is illustrated well in the following chart, which tracks the first 15-year history of gaming in Atlantic City:

Atlantic City: official crime rate vs. rate adjusted for visitor base



Source: New Jersey Casino Control Commission, South Jersey Transportation Authority

This view was reiterated by former Atlantic County Prosecutor Jeffrey Blitz. In commenting at the time on the 1998 Uniform Crime Report that showed that although crime fell by 11 percent in Atlantic County, the county's crime rate appeared to be the highest in the state. Blitz believed that crime should not be measured per 1,000 year round residents in Atlantic City. This figure did not take in account the enormous number of visitors who came to Atlantic City, especially during the summer season. According to Blitz, "With that skewed figuring Atlantic County and Atlantic City will always have the highest crime rate."²⁰¹

Peter Reuter of the School of Public Affairs at the University of Maryland provided scholarly support for this position. In a 1997 study he noted:

"Certainly the overall crime in Atlantic City has increased greatly since the introduction of casinos; by the standard measure of crimes per capita, it has become the most crime-ridden city in the nation. Whereas in 1977, Atlantic City ranked as number 50 among U.S. cities with populations of more than 25,000, within two years after the introduction of large-scale casinos in 1978, it led the nation. ... However, the claims about Atlantic City usually ignore the fact that the population base for these calculations by the FBI is simply the number of residents, as is always the case for crime statistics. The resident

²⁰⁰ New Jersey Casino Control Commission, Report to the National Gambling Impact Study Commission, January 1998, p. 29.

²⁰¹ Marsha Gilbert, "Prosecutor: Crime Statistics Don't Reflect All A.C. Visitors, The Press of Atlantic City, September 7, 1999, p. C1.

population in recent years has been about 37,000. Each day now, approximately 80,000 visitors come to the casinos, offering targets for crime, as well as potential offenders.”²⁰²

Reuter highlights the most common misconception about the relationship between casinos and crime. Our over 25 years of experience in Atlantic City is that the growth in crime from a pre-casino era to a casino era can be attributed to the growth in visitation, as well as to generally improved economic conditions in which people with more money attract more criminals.

Based on a careful review of the literature, it cannot be conclusively deduced that casino gambling, in and of itself, fosters increased criminal activity. Instead, increased criminal activity is related more to an increase in the number of visitors descending upon a given area.

A 1997 report by Jeremy Margolis, a former Director of the Illinois State Police and Assistant United States Attorney in Chicago, who also testified before the National Gambling Impact Study Commission, offers further corroboration:

“A thorough consideration of the literature indicates that there is little valid evidence to support the notion that the presence of casino gaming in a community has any meaningful impact on crime rates. The literature shows that communities with casinos are just as safe as communities that do not have casinos. Many jurisdictions hosting a single casino or a small number of casinos experience no increase in crimes or crime rates following the introduction of casino gaming. In some cases, the numbers of crimes actually decrease, as do crime rates. Where the number of crimes has increased following the introduction of gaming – a scenario sometimes experienced where clusters of casinos have commenced operations or in very small host communities – the increase in the number of crimes is not due to gaming per se, but simply because of the additional population present and, therefore, at risk in these communities. That is, when the increased population is properly accounted for, there is no increase in crime rates when comparing pre and post-casino periods. Increases in the number of crimes, if they do occur, are primarily limited to traffic violations and property claims, often of the petty variety.”²⁰³

It is interesting to note that in the case of Atlantic City, a curious fact appears to further undermine the argument that casino gambling increases crime. Throughout most of the 1990s, as Atlantic City’s casino industry matured, the crime rate went down.²⁰⁴ The decrease in the crime rate was attributed to better law enforcement cooperation and techniques.²⁰⁵ It is this point that must be borne in mind. The crime rate in a community with expanded gambling opportunities can be mitigated through good law enforcement leadership, support and practices.

²⁰² “The Impact of Casinos on Crime and Other Social Issues,” by Peter Reuter, School of Public Affairs, University of Maryland, 1997.

²⁰³ Jeremy Margolis, Altheimer & Gray, “Casinos and Crime: An Analysis of the Evidence, 1997 prepared for the American Gaming Association, December, 1997, p. 59.

²⁰⁴ Pete McAleer, “Crime Continues to Drop in Atlantic City, Atlantic County,” *The Press of Atlantic City*, June 21, 1999, p. C1.

²⁰⁵ Pete McAleer, “Crime Continues to Drop in Atlantic City, Atlantic County,” *The Press of Atlantic City*, June 21, 1999, p. C1

Number of Violent Crimes Reported by Atlantic City by Year and Total						
	Population	Murder/ Manslaughter	Rape	Robbery	Assault	Total
1980	38,239	11	51	644	331	1,037
1985	38,623	8	36	562	390	996
1990	37,986	14	69	662	654	1,399
1995	36,752	15	42	554	338	949
2000	40,517	11	30	279	210	530
2001	40,854	5	33	255	450	743
2002	41,364	5	21	283	354	663
2003	40,397	5	23	276	296	600
2004	40,668	5	37	308	342	692
2005	40,669	9	44	374	326	753
2006	40,399	18	46	355	423	842

Number of Non-Violent Crimes Reported by Atlantic City by Year and Total					
	Population	Burglary	Larceny Theft	Vehicle Theft	Total Property Crime
1980	38,239	1,620	7,993	1,197	10,810
1985	38,623	1,657	11,463	707	13,827
1990	37,986	1,401	11,174	522	13,097
1995	36,752	1,245	7,554	354	9,153
2000	40,517	675	5,621	237	6,533
2001	40,854	688	5,168	178	6,034
2002	41,364	482	4,031	169	4,682
2003	40,397	596	4,094	164	4,854
2004	40,668	599	3,871	179	4,649
2005	40,669	556	3,838	154	4,548
2006	40,399	507	3,148	204	3,859

Source: www.disastercenter.com/: New Jersey Law Enforcement Agency Uniform Crime Reports 1980 to 2006.

A careful study of the literature shows that any direct relationship between the introduction of casino gambling in a community and an increase in crime is unclear and often contradictory. However, communities that successfully introduce casino gaming are likely to experience an attendant increase in the number of tourists that will descend upon that community. An increase in the number of tourists coming to a given area is likely to result in an increase in crime.

Consider that a successful casino that generates 10,000 visitor trips a day – including overnight guests – is essentially adding that number of adults to the general population. Most will be driving, adding a significant traffic burden. Because casinos serve alcohol in a variety of outlets ranging from restaurants and nightclubs to the casino floor itself, the demands also will increase for law-enforcement to increase vigilance to deal with drivers who may be under the influence of alcohol.

The dilemma for Massachusetts is that, for the most part, resources at the state level are often allocated to local communities based on population, as one objective measure, yet visitation rarely factors in to population estimates. Additionally, one concern expressed by the Massachusetts District Attorneys Association is that political representation is largely a function of population as well, thus giving densely populated areas a louder voice when it comes to demanding resources.

Spectrum suggests that visitation must be taken into account when allocating resources, particularly when it comes to funding law enforcement. The following guidelines for staffing a local law-enforcement agency have been developed by the U.S. Department of Justice:

Population Served	Full-Time Officers Per 1,000 Residents (avg. ratio)
50,000 or more	2.5
100,000 to 249,999	1.9
50,000 to 99,999	1.8
25,000 to 49,999	1.8
10,000 to 24,999	2.0
2,500 to 9,999	2.2
1,000 to 2,499	2.6
All Sizes	2.5

By this measure, a community that hosts a casino would require between 20 and 25 additional full-time officers for every 10,000 daily visitors, based on the notion that the increment in population should be judged by the average daily visitation. However, there are factors that would mitigate that. A number of visitors would arrive by bus, which reduces the number of vehicles, as well as the potential for driving while intoxicated.

In general, casinos also tend to mitigate some of the direct costs of public safety since for the most part they provide for their own security and public safety needs. They are constructed with state-of-the-art security and surveillance systems as well as fire detection and suppression equipment. As a condition of approval, casinos have often agreed to pay local governments for the costs of any additional equipment a community might need, such as a new fire apparatus, an ambulance, or a police substation.

With those factors in mind, Massachusetts should consider mitigation funding based on no more than 20 officers for every 10,000 daily visitors for host communities. Depending on the locations, of course, the number of communities that could qualify for such funding will vary.

Experience has shown that the crime rate in communities with casino gambling can be more effectively addressed by good law enforcement policies, procedures and administration. Law enforcement officials should identify, study, and when possible, replicate such techniques in their home communities. Increased police presence and community outreach, public safety awareness campaigns, inter-local cooperation and a positive relationship with casino security personnel, should be an essential part of this.

The social, demographic and urban/suburban nature of a community may have a profound effect on the relationship between gambling and crime. Communities interested in a casino development should carefully evaluate their social, physical and municipal governmental

infrastructure, as well as citizen attitudes about gambling, before proceeding with a casino initiative.

Additional funding to mitigate the increased costs of crime should be based upon actual need and not allocated according to a predetermined amount. According to one study, a gambling community can anticipate a significant increase in E-911 calls, demands for additional temporary holding cells, prisoner transportation, municipal court facilities and additional street patrols.²⁰⁶ Such additional expenses were estimated to be at least \$500,000 annually in Middleborough.²⁰⁷

To take a different, more universal approach to this question, we recognize that – as no locations for potential destination resorts have been determined – the Commonwealth needs to know whether such additional funding, based on need, is affordable within the context of three resort destinations.

With that in mind, we assume that each police and sheriff patrol officer’s salary is \$51,850, based on the Boston wage scale. If we assume an additional 50 percent increment to cover benefits and other ancillary costs, the total annual cost per officer would be \$77,775.

If each of 10,000 visitors loses \$125 per day,²⁰⁸ at a tax rate of 27 percent, the cost of 20 officers per every 10,000 visitors would be 1.3 percent of the annual gambling revenue tax generated by that daily average.

We tested these assumptions with a sensitivity analysis, examining the percentage of tax revenue that would be required to fund additional police officers by changing two key variables:

- The multiple of salary that would be required to fund the necessary positions.
- The number of patrol positions required to meet the needs of this visitor base.

Pct. Of gaming tax needed to fund additional officers, per 10,000 daily visitors, per community						
		Multiple of average salary to determine cost				
		1.5	1.6	1.7	1.8	2
No. of officers for every 10,000 daily visitors	20	1.3%	1.3%	1.4%	1.5%	1.7%
	22	1.4%	1.5%	1.6%	1.7%	1.9%
	24	1.5%	1.6%	1.7%	1.8%	2.0%
	26	1.6%	1.8%	1.9%	2.0%	2.2%
	28	1.8%	1.9%	2.0%	2.1%	2.4%
	30	1.9%	2.0%	2.1%	2.3%	2.5%

²⁰⁶ Middleborough Casino Gambling Study Committee, “Community Impact Analysis and Mitigation of a Casino Resort in the Town of Middleborough, Massachusetts, July 23, 2007. pp. 4-5.

²⁰⁷ Ibid. p. 4.

²⁰⁸ Note that is a conservative estimate. In Atlantic City, the average daily gaming revenue per visit is \$150, according to *Gaming Industry Observer*, a Spectrum publication that tracks this data.

We tested these assumptions further, examining the percentage of tax revenue that would be required to fund additional police officers by altering the key variables:

- The multiple of salary that would be required to fund the necessary positions.
- The daily gross gaming revenue generated per visitor.

Pct. Of gaming tax needed to fund additional officers, per 10,000 daily visitors, per community

		Multiple of average salary to determine cost				
		1.5	1.6	1.7	1.8	2
Gross gaming revenue per visit	\$130	1.2%	1.3%	1.4%	1.5%	1.6%
	\$120	1.3%	1.4%	1.5%	1.6%	1.8%
	\$110	1.4%	1.5%	1.6%	1.7%	1.9%
	\$90	1.8%	1.9%	2.0%	2.1%	2.3%
	\$80	2.0%	2.1%	2.2%	2.4%	2.6%
	\$70	2.3%	2.4%	2.6%	2.7%	3.0%

The two tables above illustrate some critical points that must be considered when evaluating the need to fund community services:

- While the legislation we have analyzed focuses on a percentage of gaming revenue that would be earmarked for mitigation funding, the real need for such funding will be determined by the number of people drawn to a property, particularly with respect to the number of visitors. In other words, a property that attracts fewer visitors who stay longer and spend more per visit would create less of a demand for public services than one that focuses on high volume and low spending per visit.
- This means that the bidding process must evaluate each applicant, in large measure, on its commitment to develop a destination resort, rather than a convenience-driven property. As this analysis shows, the Commonwealth and all impacted communities have an abiding interest in gaming policies that focus on high-end visitation.

This analysis indicates that, in the worst case we have envisioned, the cost of additional law-enforcement resources would require no more than 3 percent of the tax on gaming to fully fund the demand for each community. Realistically, however, the need for law enforcement and related funding would likely be no more than 1.3 percent, based on ensuring a relatively high quality visitor.

We caution, however, that the number of communities potentially impacted by casinos is impossible to ascertain in advance of knowing the location, project scope, ease of access or other factors for any of three destination resorts. Therefore, we suggest that the bidding process should require all applicants to take a broad view when defining their local community. At the same time, the Commonwealth would have an abiding interest – in terms of reducing costs and reducing the negative impact of gaming – in ensuring a relative ease of access to highways, airports, rail lines and any other means of transit that would limit automobile traffic on local roads.

Problem and pathological gambling

The 1976 Federal Commission on Gambling began its report with this simple, straightforward observation: “Gambling is inevitable. No matter what is said or done by advocates or opponents of gambling in all its various forms, it is an activity that is practiced, or tacitly endorsed, by a substantial majority of Americans.”²⁰⁹ In effect, the commission was suggesting that gambling has deep cultural and historic roots in America. At the time the report was issued in the 1970s, the American public was becoming more familiar and accepting of a growing variety of legalized gambling practices. It was in this context that the Commission, conducting one of the first authoritative and substantive studies of this topic, issued its blunt observation.

If it was “inevitable” that people would seek ways to gamble, then, some believed, it was incumbent upon government to minimize its negative impacts and maximize its benefits. At that time, the Commission estimated that less than one percent of the U.S. population were probable “compulsive” gamblers, the term that was in use then. It was not until 1980 that pathological gambling was first included as a mental health disorder in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), the official publication of the American Psychiatric Association.

In issuing its final report, the Federal Commission on Gambling helped to usher in a new era in American gambling. Their report was written at a time when casinos were only legal in Nevada and problem gambling was looked upon more as a moral failure rather than a mental illness. Today, 32 years later, only two states — Utah and Hawaii — do not have some form of legalized gambling. The other 48 states now offer one or more types of gambling opportunities ranging from tribal and commercial casino to lotteries and pari-mutuel wagering. Forty-three states have lotteries, mostly marketed as a way to fund education.²¹⁰ It is within this context of continually increasing gambling locales and varieties of gambling that problem and pathological gambling must be analyzed.

The impact of a state’s gambling policy transcends its jurisdictional boundaries. It also renders a careful study of the impact of a state’s gambling policy more difficult since the type of gaming offered in a nearby state may be the cause of one’s gambling problem rather than the style offered locally. We do not imply that a particular type of gaming can be “the cause” of pathological gambling. This is not the case, since the behavioral problems associated with pathological gambling result from an impulse control disorder or addictive behavioral pathology that can manifest itself in various ways, not just in gambling. The gambling is the means by which this problem is expressed. The accessibility of a means that is particularly attractive to the individual (i.e., nearby existence of a type of gambling they enjoy) just helps to enable the behavior, but does not cause it.²¹¹

²⁰⁹ Ibid. Commission on the Review of the National Policy Toward Gambling, *Gambling in America, Final Report* p. 1

²¹⁰ America Gaming Association, 2007 State of the States.

²¹¹ Lesieur HR, Rosenthal RJ. Pathological gambling: a review of the literature (prepared for the American Psychiatric Association task force on DSM-IV committee on disorders of impulse control not elsewhere classified). *J Gambling, Stud.* 1991;7:5-39.

Rosenthal, R. The categorization of pathological gambling and the Impulse-Control Disorders Not Elsewhere Classified. Proceedings of the 19th annual conference on prevention, research, and treatment of problem gambling. June 23–25, 2005, New Orleans, Louisiana. National Council on Problem Gambling, Washington, DC.

Grant JE, Kim SW. Demographic and clinical features of 131 adult pathological gamblers. *J Clin Psychiatry* 2001;62:957-962.

According to one study:

“The availability of legal gambling has increased sharply in the past 20 years. More people are gambling, and they are wagering more. As a result, there is increased concern about pathological gambling. Clinical evidence suggests that pathological gamblers engage in destructive behaviors: they commit crimes, they run up large debts, they damage relationships with family and friends, and they kill themselves. With the increased availability of gambling and new gambling technologies, pathological gambling has the potential to become even more widespread. A greater understanding of this problem through scientific research is critical. Recent methodological and theoretical advances in epidemiology, medicine, and the social and behavioral sciences should aid this understanding.”²¹²

How to manage negative social impacts is clearly an area of critical concern to Massachusetts regardless of whether the Commonwealth legalizes casino gaming in any form. A successful approach lies in developing responsive and effective public policies and industry programs to prevent and reduce gambling-related problems. At the same time, such policies should encourage capital investment, increased employment, tax revenues, more tourism and other public policy goals

In an interview, Kathleen M. Scanlan, Executive Director, Massachusetts Council on Compulsive Gambling, spoke frankly and knowledgeably about the challenges that various forms of gambling readily available to the citizens of Massachusetts impose upon her organization.²¹³ Currently available local opportunities to gamble include four race tracks, state lotteries, keno, one floating casino that cruises beyond U.S. territorial waters, and nearby casinos in neighboring states. Scanlan also noted that obsessive stock market trading and illegal wagering such as sports betting are other types of gambling behaviors affect her caseload as well.

Scanlan believes that, at the present time, resources to address compulsive gambling in Massachusetts could be expanded. The primary source of funding for this purpose is unclaimed lottery winnings that amount to approximately \$1 million a year. She further stated that treatment centers are not funded in the most optimal manner and she believes such centers to be underdeveloped and under-used. The centers are paid on per client or fee-for-service basis. Getting clients the treatment they need is very important, especially since new therapies are showing much promise, she said.

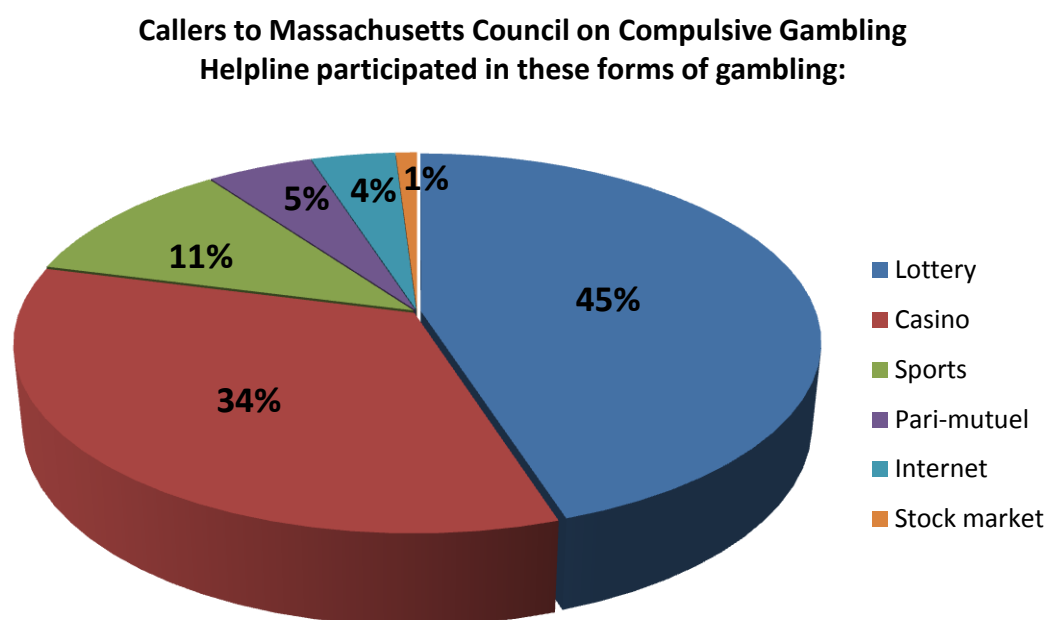
Scanlan stated that the Council’s greatest concern is that increased gambling opportunities will arise in Massachusetts without adequate safeguards in place to protect vulnerable individuals. With an expansion of gaming in the state, Scanlan predicts that there will be an initial bulge in individuals with gambling-related problems that will level off over time. Similar type increases were seen with the introduction of keno and casino gaming in Connecticut. Gambling problems within specific population groups were also discussed.

²¹² Committee on the Social and Economic Impact of Pathological Gambling, National Research Council, “Pathological Gambling: A Critical Review,” Executive Summary, <http://books.nap.edu/catalog/6329.html>, p. 3.

²¹³ Interview conducted by Spectrum Gaming, Boston Massachusetts, March 13, 2008.

Nineteen percent of adolescents and 16 percent of college students are said to experience such problems.²¹⁴

The Massachusetts Council on Compulsive Gambling instituted a 24-hour Helpline in 1987, and since 1989, state law required that all gambling outlets post the number.²¹⁵ The Council reports receiving 1,472 calls to its Helpline in Fiscal 2007, which ended June 30, 2007. The following chart summarizes the type of calls received:



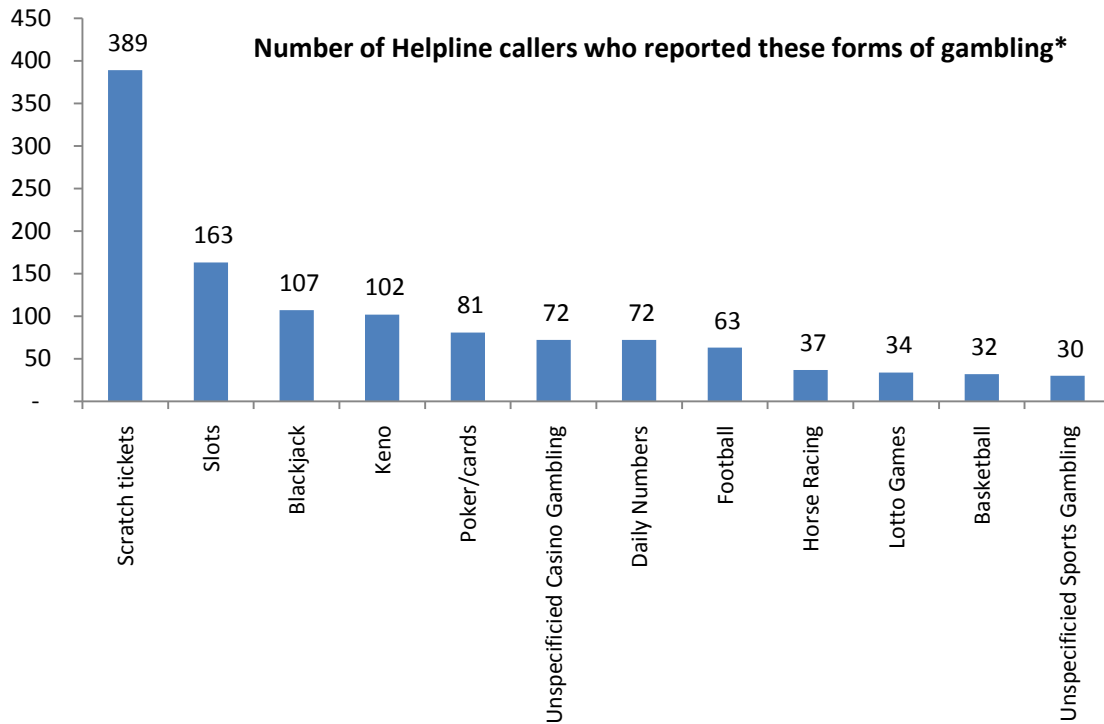
Source: Massachusetts Council on Compulsive Gambling, Fiscal 2007

As the chart shows, the great majority of such calls came from people who had gambled in either the lottery or casinos.

Since Massachusetts does not have casinos, this high percentage – about one-third – would support the argument made that other states that do have casinos are effectively exporting the treatment costs for such gamblers. The following chart lists the 12 most prevalent forms of gambling cited by Helpline callers:

²¹⁴ Shaffer, H.J., and Korn, D.A. (2002) Gambling and Related Mental Disorders: A Public Health Analysis. *Annual Review of Public Health*. 23, 171-212.

²¹⁵ Massachusetts Council on Compulsive Gambling



*Helpline callers could report multiple types of gambling. Source: Massachusetts Council on Compulsive Gambling

The table below, from the council, lists the county of residence for 867 callers who volunteered their place of residence:

County	No. of callers who reside there
Berkshire	12
Franklin	8
Hampshire	12
Hampden	45
Worcester	132
Middlesex	186
Essex	85
Suffolk	128
Norfolk	86
Plymouth	63
Bristol	89
Barnstable	21

Source: Massachusetts Council on Compulsive Gambling

A number of public officials and legislators reinforced Scanlan's point that adequate funding must be provided for problem gamblers.

Studies²¹⁶ have found that:

- Most social costs result from individuals with low to intermediate (levels 1 and 2) symptom patterns.
- Problem gamblers are more responsive to intervention programs than pathological gamblers.

Problem gambling funds, under the proposal, would come from the Public Health Mitigation Fund, which would receive 2.5 percent of gross casino revenues. The administration expects that figure to total \$50 million, while our estimate (based on our moderate case scenario) would be closer to \$37.5 million. And while either figure is impressive, it is important to note that the money is to split among three areas:

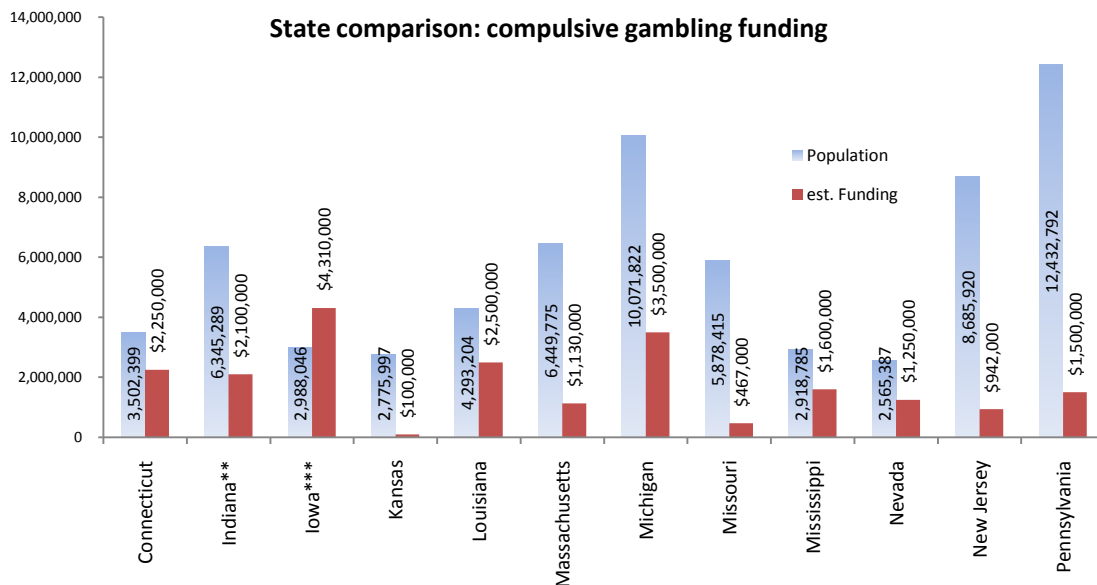
- Prevention and treatment of gambling-related problems
- Domestic violence and child welfare services
- Education and prevention campaigns

Even an equal split among the three areas would likely make Massachusetts the state with the highest dollar contribution to problem gambling.

While it would not be reasonable to expect all of the available funds to be used for compulsive gambling treatment, it is important that it receive a substantial amount of money from the Public Health Mitigation Fund as problem gambling was a universal concern of almost everyone we interviewed about the casino proposal.

²¹⁶ Ibid

The following chart lists funding by state:



****Total of \$4.2 million into Problem Gambling Fund, \$2.1 million used for substance abuse**

*****\$6 million total funding from percentage of Gross Revenues; \$1.69 million to other addiction services**

Sources:

Connecticut: Source: Connecticut Lottery Corporation, Year: FY 2008

Indiana: Indiana Gaming Commission, Year: FY 2007

Iowa: Iowa Department of Public Health, Iowa Gambling Treatment Program, Year: FY 2008

Kansas: Kansas Department of Social and Rehabilitation Services, Year: FY 2008

Louisiana: Louisiana Department of Health and Hospitals, Office of Addictive Disorders, Year: FY 2008

Massachusetts: Massachusetts Council on Compulsive Gambling, Year: FY 2008

Michigan: Michigan Department of Community Health, Year: FY 2008

Missouri: Missouri Department of Mental Health, Year: FY 2007

Mississippi: Mississippi Council on Problem and Compulsive Gambling, Year: FY 2008

Nevada: Nevada Department of Health and Human Services, Year: FY 2008

New Jersey: Council on Compulsive Gambling of New Jersey, Year: FY 2008

Pennsylvania: Pennsylvania Gaming Control Board, Year: FY 2008

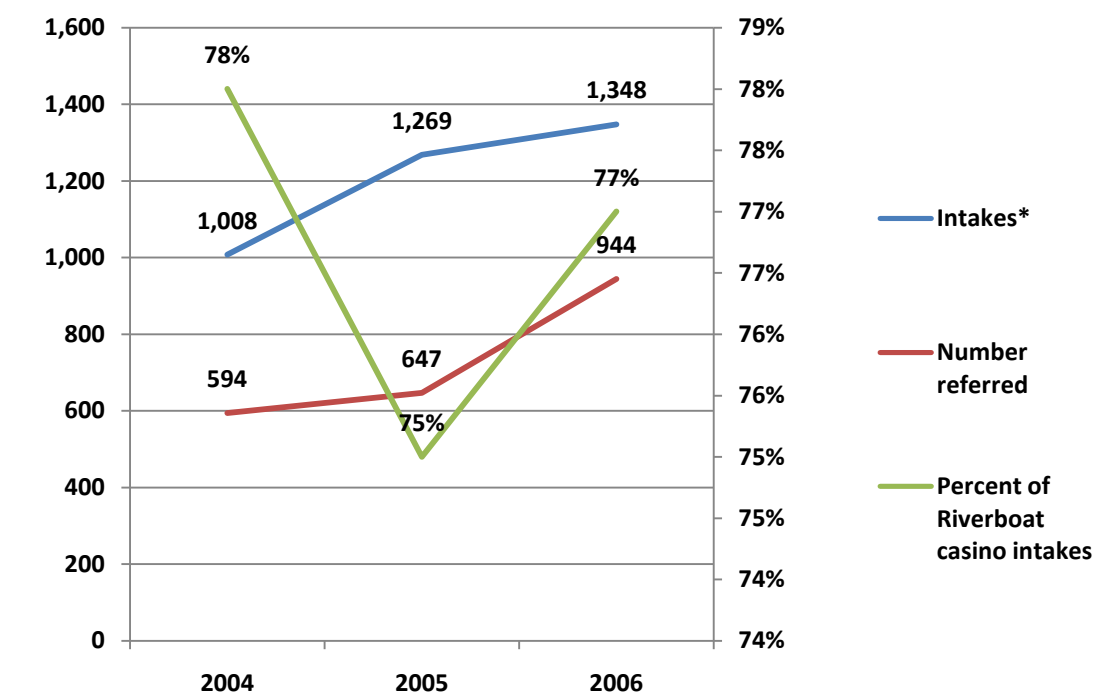
Indiana, which has a population roughly the same as Massachusetts,²¹⁷ puts \$4.2 million each year into its Problem Gamblers Fund, with half being used for substance abuse treatment, as noted in the chart above. With that in mind, the Indiana experience may provide useful insights for policy makers in Massachusetts. What's little known about the Problem Gamblers Fund is that half of the money that goes into it is used for substance abuse treatment. In some years, as little as a quarter of the Problem Gamblers Fund was used for problem gamblers.²¹⁸

²¹⁷ U.S. Census Bureau estimate for 2006. Massachusetts, 6,437,193; Indiana, 6,313,520

²¹⁸ Interview May 5, 2008 with Jerry Long, executive director of Indiana Council on Problem Gambling

Indiana has 11 riverboat casinos. In addition, two racinos are expected to open in June 2008. The chart shows trends over the three most recent years that were available from the Indiana Council on Problem Gambling. In that time, one new casino in French Lick has opened. The state now has 11 casinos. Two racinos with 2,000 slot machines each are expected to open by June 1.

Intakes are calls to the state's hotline deemed to be related to a problem gambler seeking assistance. The number of referrals indicates the number of people who were referred to a treatment provider. The hotline actually receives many more calls from the general public that have nothing to do with problem gambling. They are from patrons seeking information about gambling.



Source: Indiana Council on Problem Gambling
 *Intakes represent calls from gamblers seeking help

The Indiana Council on Problem Gambling lobbied its state administration earlier this year to agree to use 100 percent of the Problem Gamblers Fund for the treatment of problem gamblers. The agreement will be phased in over the next five years. In addition, the Legislature passed a bill requiring the two new racinos to each contribute \$500,000 to the fund.²¹⁹

The council's executive director, Jerry Long, noted that, as a result, the amount used for treatment of compulsive gamblers will eventually total \$5.2 million, more than double what it currently is. He said Massachusetts would be wise to avoid the controversy that developed in Indiana by mandating a specific percent or amount that will be given each year to combat problem gambling. Long is hopeful that the increased funds in Indiana will enable the state to use trained crisis counselors. The current practice, he said, is to use referral operators. Another

²¹⁹ Interview May 5, 2008 with Jerry Long, executive director of Indiana Council on Problem Gambling

problem, he noted, is that it takes far too long, sometimes as much as two weeks, to get a problem gambler into treatment. That should happen within 48 hours, he said.

“The current Indiana law only allows the state to pay for treatment for problem gamblers with incomes of less than \$20,000,” Long said. That figure is way too low as it rules out any middle class person, he noted. In five years, after Indiana increases its funding level to more than \$5 million, Long said income limits will be removed. According to Long, the cost of treatment per individual in Indiana averages around \$2,500.

In New Jersey, the state allocated less than \$1 million dollars in the most recent fiscal year for problem gambling. Almost all of it came from fines assessed against casino operators. The problem gamblers there are referred to a certified group counselor for up to 25 sessions at a cost of \$85 per session. There are no income limits.²²⁰

Long suggested Massachusetts would do well to create a program with no income limits as well. His point about mandating a certain percent or amount for problem gaming is well taken. Such a move would guarantee the program a stable source of funding.

While the Massachusetts Council on Compulsive Gambling does not take a position either for or opposed to gambling as such, they do demand responsible public policy. According to the Council:

“Responsible public policy takes into account that there is a downside associated with gambling, makes provisions to limit unintended negative consequences, and assures help for those who are harmed through gambling. To increase opportunities to gamble and, at the same time, not have adequate safety measures in place creates a particularly risky situation. Increases in gambling opportunities need to be matched by increased awareness of risk, increased prevention initiatives and increased resources for help. With gambling available at present in Massachusetts and in considering expanding it, the Commonwealth needs to make a strong commitment to a full array of services that include a continuum of prevention, intervention and treatment strategies.”²²¹

Considerations of co-morbidity:

Addressing the challenge of problem and pathological gambling is complicated by the fact that an individual may be plagued by preexisting behavioral disorders such as drug and alcohol problems as well as other types of mental illnesses. Once again, the question of causation is raised. Simply noting that certain types of behavioral disorders are associated with gambling does not necessarily mean that gambling caused them.

This factor was cited by the 1999 National Gambling Impact Study Commission which noted:

“Pathological gambling often occurs in conjunction with other behavioral problems, including substance abuse, mood disorders, and personality disorders. The joint occurrence of two or more psychiatric problems — termed co-morbidity — is an important, though complicating factor in studying the basis of this disorder. Is problem or pathological gambling a unique pathology that exists on its own or is it merely a

²²⁰ Interview with Jeff Beck, managerial assistant for the New Jersey Council on Compulsive Gambling

²²¹ Massachusetts Council on Compulsive Gambling, “Problem Gambling Services in Massachusetts,” January 14, 2008.

symptom of a common predisposition, genetic or otherwise, that underlies all addictions?”²²²

Douglas Walker elaborates upon this point:

“If gambling were not an option, a person who is predisposed to a pathological disorder may manifest his disorder in other unhealthy ways. Many pathological gamblers have other behavioral disorders – coexisting disorders or co-morbidity as it is called in the literature. Examples include alcohol and drug problems, and mood and anxiety disorders. If pathological gambling is simply a symptom of some more basic disorder, then, it is the more basic disorder rather than gambling itself that is the underlying cause of the adverse consequences and social costs of the pathological gambling...In addition, clinical research has shown that a large proportion of pathological gamblers have coexisting disorders. The study by Petry, Stinson and Grant (2005) indicates the extent to which pathological gamblers have an alcohol use disorder. The lifetime prevalence rate for drug use disorders among pathological gamblers is 38.1 percent, and for nicotine dependence it is 48.9 percent. Other co-morbid conditions include mood disorders (49.6 percent), anxiety disorders (41.3 percent), and obsessive-compulsive personality disorder (28.5 percent). ... The recent study by Westphal and Johnson (2007) finds that 77 percent of their study subjects with a gambling problem had co-occurring behavioral problems, and 56 percent had multiple problems.”²²³

The data therefore suggest that individuals who are afflicted with such behavioral issues may be more vulnerable to a gambling problem. However, even in the absence of opportunities to gamble, they would have to cope with the ramifications of other problem behaviors.

Whatever the significance of such findings, they should in no way minimize the social responsibility and challenges that are associated with problem and pathological gambling. However, co-morbidity should be given consideration when determining the social costs related to gambling policy. For example, if a person is both an alcoholic and loses his business because of a gambling problem, what degree of responsibility should be attributed to the gambling problem and what degree to the alcohol problem? Failure to take co-morbid disorders into consideration may tend to overstate the impacts of problem gambling and lead to policies and programs with limited range and effectiveness.

Problem gambling and bankruptcy

Bankruptcy is a process under federal law that provides relief from overwhelming financial obligations as well as an orderly means for creditors to obtain some degree of payment. There is concern whether casinos increase the rate of bankruptcies in the communities that host them. This is based on the notion that problem and pathological gamblers accumulate high levels of unsustainable debt and declare bankruptcy at higher rates than others who gamble or do not gamble at all.

²²² The National Gambling Impact Study Commission Final Report, p. 4-3.

²²³ Ibid. Walker, American Gaming Association 10th Anniversary White Paper Series, “Challenges that Confront Researchers on Estimating the Social Costs of Gambling,” p. 2.

The relationship between the proliferation of gambling and increased bankruptcies was noted by Stuart A. Feldman, President of SMR Research Corporation, in a 1999 presentation before the House Subcommittee on Commercial and Administrative Law regarding the increasing number of bankruptcies in America. Feldman noted that among other factors:

“The spread of casino gambling appears to be a problem. When we look at bankruptcy rates in counties that have major gambling facilities in them, those rates are higher than in counties that have no gambling facilities...On the county map in Nevada, the closer you come to Las Vegas and Reno, the higher the bankruptcy rate generally gets. In California, the highest bankruptcy rates are in San Bernardino and Riverside Counties, which are closest to Las Vegas, and the fourth highest rate often is in Sacramento County, closest to Reno. In New Jersey, Atlantic County, which is where the casinos are, typically has either the highest bankruptcy rate or one of the two or three highest in the state. In Tennessee, the bankruptcy rate is highest in Shelby County, the heart of Memphis, which is right across the state line from the Tunica MS casino gambling complex, reportedly the largest outside of Nevada.”²²⁴

Three other researchers, John M. Barron, Michael E. Staten, Stephanie M. Wilshusen, concluded that the proximity of casino gambling does correlate with higher bankruptcy rates. However, they note that although casino gambling does have a more pronounced local impact, the proliferation of casino gambling fails to explain much of the rise in bankruptcies during the preceding decade.²²⁵

This issue was examined by the National Opinion Research Center (NORC) in their report to the National Gambling Impact Study Commission in 1999. They noted:

“Pathological gamblers have clearly elevated rates of indebtedness, both in an absolute sense and relative to their income. Indebtedness per person is 25-percent greater than that of low-risk gamblers and about 120-percent greater than that of non-gamblers. However, the disparity is even greater when debt is compared to income: pathological gamblers owe \$1.20 for every dollar of annual income, while low-risk and non-gamblers only owe \$0.80 and \$0.60, respectively. In accord with their higher debt, pathological gamblers have significantly elevated rates of having ever declared bankruptcy: 19.2 percent, versus 5.5 percent and 4.2 percent for low-risk and non-gamblers. Again, for problem gamblers the story is not as clear. Their average level of indebtedness is actually the lowest of any type of gambler; however, they still have an elevated rate of bankruptcy (10.3 percent), but this is only marginally statistically significant when compared to the rate among non-gamblers. On average, excess lifetime losses involved with bankruptcy are about \$3,300 for pathological gamblers and \$1,600 for problem gamblers. Almost 19 percent of pathological gamblers have ever declared bankruptcy, versus an expected 10.8 percent, given their personal characteristics. For problem gamblers, their 10-percent rate compares to an expected rate of 6.3 percent.”²²⁶

²²⁴ Stuart A. Feldman, President SMR Research Corp., “The Rise in Personal Bankruptcies: Causes and Impact,” Presentation before the House Subcommittee on Commercial and Administrative Law, March 10, 1998.

²²⁵ John M. Barron, Michael E. Staten, Stephanie M. Wilshusen (2002) The Impact of Casino Gambling on Personal Bankruptcy Filing Rates, *Contemporary Economic Policy* 20 (4), 440–455 doi:10.1093/cep/20.4.440. This is a revision of a paper presented at the Western Economic Association International 75th Annual Conference, Vancouver, B.C., June 30, 2000.

²²⁶ NORC, “Report to the National Gambling Impact Study Commission, 1999, p. 46.

Two Creighton University researchers, Ernie Goss and Edward A. Morse, also studied the relationship between casinos and individual bankruptcy rates.²²⁷ They analyzed bankruptcy filings between 1990 and 2002, a period when bankruptcies grew nationally from 709,967 to 1,520,717. They noted that during this timeframe changing economic and demographic data made the assignment of cause difficult to isolate without an in-depth analysis that would disentangle the variables that contribute to higher bankruptcy rates. They also studied impact of casinos over time and only focused on the specific county where the casino was located. They concluded:

“Estimates contained in this study show a statistically significant and positive correlation between the introduction of legalized casinos in a county and individual bankruptcy rates. These effects occur over a time cycle of several years. After small increases in bankruptcy rates during the initial years of operation, we estimate that bankruptcy rates in a casino county will be lower than a non-casino county for the third through the ninth year of operations. Thereafter, the rate differentials between the casino and non-casino counties are expected to increase, with casino counties having substantially higher bankruptcy experiences than the non-casino counties. These results suggest that the bankruptcy impacts from many of the casinos opened during the latter half of the 1990s are just beginning to appear, and that the social costs of those impacts need to be considered as further expansions are planned. Estimates from our model show that personal bankruptcy rates in a non-casino county increased by 266 percent over a 13-year period whereas a county with a casino in operation during this period would experience an increase in bankruptcy rates by approximately 325 percent -- a compound annual growth rate differential of nearly 2 percent. It should be noted that this analysis ignores the bankruptcy results from non-casino counties that are contiguous to casino counties. In that respect, our results likely understate the bankruptcy impact of casinos.”²²⁸

In terms of this analysis, we have taken a broader view of such issues and note that a number of factors could be present that would impact bankruptcy rates that have little to do with the nature of casinos. Gaming is often introduced in communities that have been struggling economically for years, where the potential for bankruptcy is already high. At the same time, because casinos are often viewed as an economic catalyst that prompts local entrepreneurship, this could also be a risk factor that might fuel such findings.

This debate was summarized well in an article that appeared in the *Las Vegas Sun* in 2001 detailing a report issued by SMR Research that reported a link between casinos and bankruptcy rates:

“In 2000, Nevada ranked fourth among the 50 states in bankruptcy rates, behind Tennessee, Utah, and Georgia. In 1996, Nevada also ranked fourth behind the same three states, SMR Research's first bankruptcy study said.

SMR's 12-month study found that the 244 U.S. counties that have casinos had a bankruptcy filing rate that was 13.5 percent higher than the 2,865 counties that didn't have casinos in 2000.

²²⁷ Ernie Goss and Edward A. Morse, (2005) Creighton University, The Impact of Casino Gambling on Personal Bankruptcy Filing Rates From 1990 to 2002, Working Paper: 2005-04

²²⁸ Ibid. pp. 17 – 18.

‘There is a connection between problem gambling and the increase in bankruptcy filing rates,’ said Ed Looney, executive director of the Council of Compulsive Gambling of New Jersey.

Atlantic County, NJ, which has 12 casinos, all of which are in Atlantic City, had a bankruptcy filing rate double that of the state's average.

Atlantic County's bankruptcy filing rate went from 5.28 per 1,000 adults in 1994 to 11.68 per 1,000 adults in 2000. The state's average, excluding Atlantic County, rose from 3.83 in 1994 to 5.99 in 2000. ...

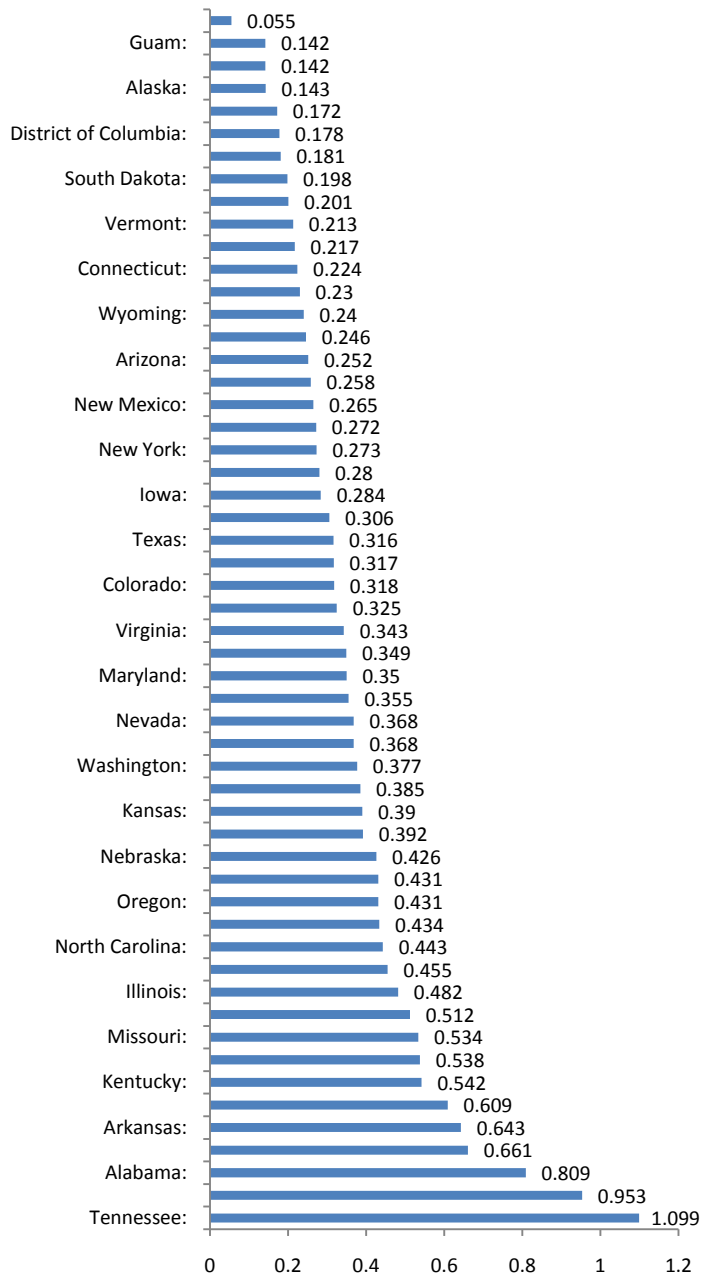
Frank Fahrenkopf, chief executive of the American Gaming Association, said the SMR Research study is misleading, noting that other variables -- such as aggressive soliciting by credit card companies and liberalized bankruptcy laws -- assist in the rise of bankruptcy rates.

Fahrenkopf acknowledged that communities with casinos often do have higher bankruptcy rates. He believes that's because those communities attract people trying to get a fresh start. Those efforts don't always work out, leading to personal bankruptcy, Fahrenkopf said.

‘That doesn't mean they filed for bankruptcy because there are casinos in the community,’ he said.”

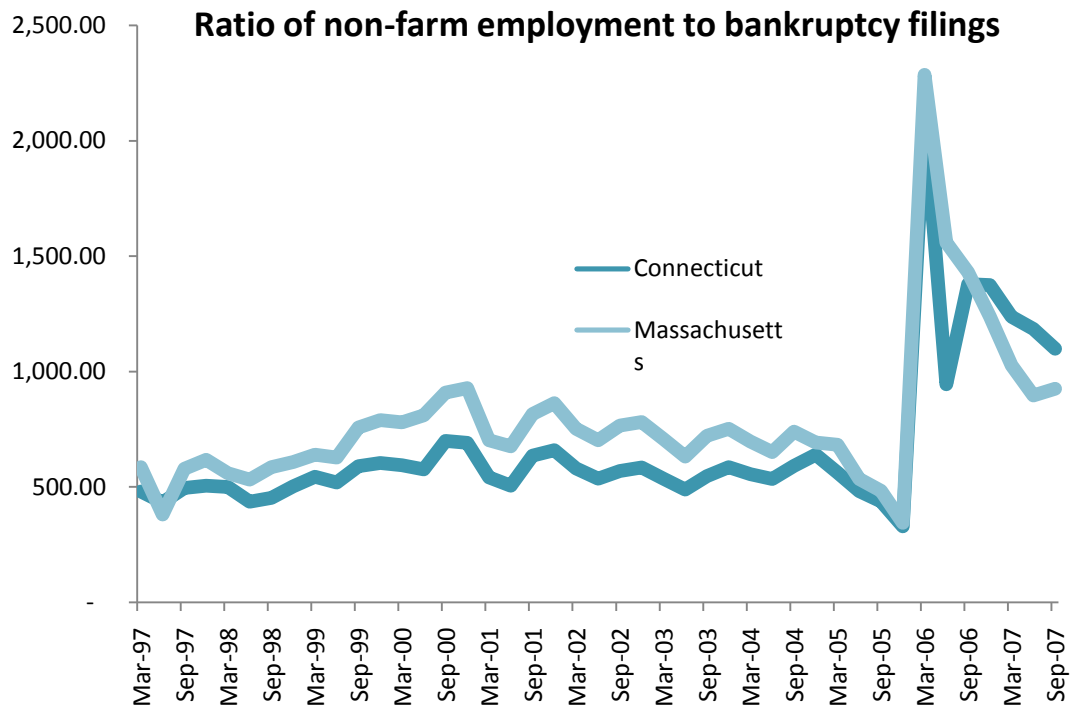
In studying this issue over years, we suggest that it be viewed in the broadest possible context. The following chart, which is a snapshot of a recent quarter that was compiled by the American Bankruptcy Institute, shows no correlation between states that have casinos and those that do not in terms of bankruptcy rates.

Bankruptcy filings per 1,000 people



Source: American Bankruptcy Institute, first quarter 2006

We also looked at two New England states, one with destination casinos and one without:



Source: American Bankruptcy Institute, U.S. Bureau of Labor Statistics

The spike in 2006 can be directly attributed to changes in federal bankruptcy law that prompted a spate of nationwide filings in advance of an arbitrary deadline that changed the criteria for eligibility. For much of this period, Massachusetts exhibited a higher rate of jobs to bankruptcies than nearby Connecticut, although changes in federal law prompted a reversal of that.

The following table provides a more detailed look for the entire New England region:

Total Bankruptcies (number of business and consumer filings, not seasonally adjusted)								
	US	NE	CT	ME	MA	NH	RI	VT
Mar-94	206,527	7,936	2,105	419	3,639	763	820	190
Jun-94	216,176	8,610	2,339	479	3,917	844	817	214
Sep-94	208,163	7,623	2,092	429	3,429	776	690	207
Dec-94	201,591	7,066	1,877	424	3,207	671	670	217
Mar-95	212,601	8,058	2,158	470	3,696	718	779	237
Jun-95	235,267	8,949	2,401	558	3,924	897	899	270
Sep-95	233,562	8,360	2,303	564	3,601	813	825	254
Dec-95	244,467	8,477	2,284	600	3,688	779	831	295

Total Bankruptcies (number of business and consumer filings, not seasonally adjusted)								
	US	NE	CT	ME	MA	NH	RI	VT
Mar-96	266,113	9,354	2,560	629	4,027	810	997	331
Jun-96	297,121	10,945	3,025	825	4,621	1,022	1,109	343
Sep-96	303,268	10,377	2,809	756	4,453	935	1,087	337
Dec-96	311,131	10,817	2,907	863	4,634	925	1,131	357
Mar-97	335,073	12,310	3,282	869	5,186	1,151	1,357	465
Jun-97	367,168	16,327	3,717	1,145	8,190	1,298	1,474	503
Sep-97	353,515	12,725	3,237	1,104	5,377	1,212	1,308	487
Dec-97	347,685	12,495	3,246	1,090	5,133	1,240	1,330	456
Mar-98	354,118	12,801	3,223	984	5,565	1,190	1,372	467
Jun-98	373,460	14,374	3,770	1,241	5,998	1,414	1,436	515
Sep-98	361,205	13,208	3,630	1,195	5,439	1,141	1,304	499
Dec-98	353,108	12,839	3,332	1,093	5,317	1,249	1,365	483
Mar-99	330,784	11,729	3,015	1,029	4,941	1,068	1,227	449
Jun-99	345,956	12,484	3,217	1,153	5,181	1,076	1,379	478
Sep-99	323,550	10,755	2,828	1,023	4,291	980	1,206	427
Dec-99	318,634	10,583	2,803	967	4,183	979	1,248	403
Mar-00	312,335	10,388	2,799	918	4,153	967	1,157	394
Jun-00	321,729	10,819	2,947	1,142	4,113	1,008	1,232	377
Sep-00	308,718	9,321	2,421	1,009	3,674	830	1,064	323
Dec-00	310,169	9,320	2,477	973	3,658	810	1,004	398
Mar-01	366,841	11,608	3,072	1,029	4,734	1,028	1,306	439
Jun-01	400,394	12,767	3,337	1,364	4,983	1,193	1,385	505
Sep-01	359,518	10,092	2,635	1,034	4,079	838	1,095	411
Dec-01	364,971	9,904	2,567	1,121	3,855	872	1,096	393
Mar-02	379,012	10,831	2,847	1,033	4,283	1,001	1,228	439
Jun-02	400,686	11,771	3,131	1,163	4,672	1,031	1,311	463
Sep-02	401,306	10,982	2,909	1,148	4,255	1,000	1,192	478
Dec-02	395,129	10,746	2,860	1,076	4,187	1,003	1,175	445
Mar-03	412,968	11,315	3,042	1,081	4,459	1,088	1,171	474
Jun-03	440,257	12,784	3,377	1,292	5,091	1,243	1,261	520
Sep-03	412,989	11,203	2,988	1,144	4,431	1,055	1,105	480
Dec-03	393,348	10,739	2,836	1,143	4,273	1,039	1,019	429
Mar-04	407,572	11,274	2,921	1,111	4,484	1,203	1,081	474

Total Bankruptcies (number of business and consumer filings, not seasonally adjusted)								
	US	NE	CT	ME	MA	NH	RI	VT
Jun-04	421,110	12,039	3,101	1,248	4,928	1,205	1,099	458
Sep-04	396,438	10,800	2,783	1,134	4,333	1,125	1,013	412
Dec-04	371,668	10,687	2,612	1,014	4,661	1,117	930	353
Mar-05	401,149	11,361	2,910	1,060	4,591	1,276	1,088	436
Jun-05	467,333	14,311	3,465	1,494	6,032	1,367	1,408	545
Sep-05	542,002	15,964	3,789	1,891	6,662	1,580	1,428	614
Dec-05	667,431	21,511	5,107	2,169	9,421	1,872	1,915	1,027
Mar-06	116,771	3,157	786	227	1,388	322	301	133
Jun-06	155,833	5,239	1,785	324	2,090	464	397	179
Sep-06	171,146	5,012	1,216	377	2,278	550	433	158
Dec-06	177,599	5,561	1,238	399	2,652	594	493	185
Mar-07	193,641	6,422	1,350	484	3,127	696	583	182
Jun-07	210,449	7,429	1,441	678	3,671	736	672	231
Sep-07	218,909	7,472	1,542	577	3,558	776	768	251

Source: Federal Reserve Bank of Boston

Massachusetts must bear in mind the observation of Ed Looney, former director of the New Jersey Council on Compulsive Gambling, who noted that problem gamblers are much more likely to fall into severe economic problems, such as bankruptcy. This is an issue that must be considered in this debate in Massachusetts, and we suggest that a comprehensive approach to pathological and problem gaming behavior is the best way to address a host of related issues.

Easy access and problem gambling

Much research suggests that factors that lead to increased availability and opportunities to gamble throughout the general population will also contribute to a corresponding increase in the prevalence of problem gambling. The growth of the casino gambling industry did not come without some adverse consequences. The National Gambling Impact Study Commission noted the nearby presence of gambling facilities as a contributing factor in the incidence of problem and pathological gambling in the general population.²²⁹

Nevada has problem gambling rates between two and three times the national average²³⁰. More recently, Shaffer et al. examined prevalence rates from counties within Nevada and found that the four counties with the greatest access to casinos had the highest problem gambling rates and the four with the least availability had the lowest rates.

²²⁹ The National Gambling Impact Study Commission Final Report, p. 4-4.

²³⁰ Volberg, R.A. (2002). *Gambling and problem gambling in Nevada*. Report to the Nevada Department of Human Resources. Carson City, NV: Department of Human Resources. Available at <http://www.hr.state.nv.us/>

One study which has examined availability and problem gambling compared the prevalence of pathological gambling in five states in the United States²³¹; and statistically significant results were found. In states where legal gaming had been available for less than 10 years, less than 0.5 percent of the adult population was classified as probable pathological gamblers. In states where legal gambling had been available for more than 20 years, approximately 1.5 percent of the adult population was classified as such. Thus, increasing the availability of gaming will contribute to an increase in the prevalence of gambling-related problems in the general population.

In the Netherlands, the introduction of casinos and an increase in the number of gaming machines in other venues appear to have led to an increase in compulsive gambling²³². A positive relationship between casino proximity and gambling problems was also found in the 1999 New Zealand national survey.²³³ In that study, higher prevalence rates were found in the two New Zealand cities, Auckland and Christchurch, with casinos than in other cities without them.

However, some longitudinal studies have indicated that the development of comprehensive prevention strategies and the provision of treatment and information about problem gambling can militate against such increases. Volberg's study²³⁴ of Montana, North Dakota, Oregon, and Washington states demonstrated that problem gambling prevalence declined in the states with services and increased in the states without them.

Thus, it is possible to minimize the negative social impacts when new casino projects are introduced, with the development of a well-thought out plan. The plan should include the provision of treatment program and education of public and casino employees, among other initiatives.

Casino employees and problem gambling

Arnold Wexler, a private consultant who formerly served as executive director of the New Jersey Council on Compulsive Gambling, who worked on this analysis, cautioned that a focus on employees is essential, as experience has shown that casino employees in various markets have had a noticeable share of compulsive gamblers.

As a participant in the research for this report, Wexler²³⁵ – a strategic partner of Spectrum – noted the following:

²³¹ Volberg, R.A. (1994). The prevalence and demographics of pathological gamblers: Implications for public health. *American Journal of Public Health*, 82(2).

²³² Remmers, P. (1995). The use of early recognition for the gaming business. *The National Association for Gambling Studies*, 7(1), 26-30.

²³³ Abbott, M.W., & Volberg, R.A. (2000). Taking the pulse on gambling and problem gambling in New Zealand: Phase one of the 1999 national prevalence survey report number three of the New Zealand gaming survey. Wellington: Department of Internal Affairs.

²³⁴ Volberg, R.A. (in press). Changes in gambling availability, participation and problem gambling prevalence in four states. *Journal of Gambling Issues*.

²³⁵ This section was drafted by Arnie and Sheila Wexler, who have provided extensive training on Compulsive, Problem and Underage Gambling, and have written Responsible Gaming Programs for major gaming companies. In addition, they have worked with casino regulators and have presented educational workshops nationally and internationally. They also run a national help line (888 LAST BET). Sheila Wexler is the Executive Director of the Compulsive Gambling Foundation

“When I was the Executive Director of the Council on Compulsive Gambling of New Jersey, 8 percent of our calls to the hot line came from casino employees. Since 1994, we have trained more than 35,000 casino workers, nationwide. Raising the awareness of employees through training on the subject of compulsive gambling is sometimes the catalyst for the employee to seek help. Every time we do training, some workers who have a gambling problem, themselves, or have a family member with the problem, approach us for help. Often, we receive phone calls from employees, several months after they hear our presentation. Many of these people find it difficult to come forward with the problem, fearing that exposure will affect their chances for advancement with the company. Supervisors who recognize an employee who has a serious gambling problem also often approach us.

“The problem exists at all levels of employment. Workers have approached us, from housekeepers to executives of casino companies. Here are some examples:

- There was a housekeeper who revealed that she stole items from guest rooms in order to support her gambling addiction.
- A casino limousine driver called us and was planning to kill himself as the result of his gambling problem.
- There was a pit boss who let dead-beat gamblers sign markers and then got a pay off from the gambler.
- A racetrack announcer called me for help after trying to fix races in order to get money to gamble with.
- We received a call for help from an employee on the hotel side, who was using customers' credit cards to access gambling money for his gambling.
- A legal counsel to a casino company asked for our help in getting him excluded from gambling in casinos in his state.
- A woman who worked in credit came forward to ask for help as she was in jeopardy of losing her marriage and children.

“As problem or compulsive gamblers become more and more preoccupied with their gambling, they will eventually affect their company and their job performance. Some areas include erratic work performance, inconsiderate treatment of customers, borrowing money from coworkers or customers, absenteeism, tardiness, theft, embezzlement, affecting the integrity of the game they are dealing or by being coerced to fix games by bookmakers or loan sharks to whom they may owe money, as well as increased health care costs for them and their affected families.

“It would be beneficial and good, prudent business judgment, if gaming companies helped their employees who had a gambling problem, rather than terminating them. Employees are their most valuable asset as they are often, in the front line with their customers. Employers and supervisors need to realize that compulsive gambling is an addiction, similar to alcoholism and drug addiction.

“Many companies already have health benefits that include treatment for other addictions. These benefits should also include treatment for compulsive gambling for

employees and their families, paid for by the employer. Employers can also make available a room for an in house Gamblers Anonymous meeting. Human Resource and EAP personnel should have training on the subject of compulsive gambling. Brochures and information regarding help for a gambling problem, should be made available to all employees.

“Another area that employers may want to consider is the legal ramifications of not taking action if they recognize that their employee has a gambling problem. They may be held accountable by the regulatory body in their state, for continuing to employ someone who has a compulsive gambling problem and is currently gambling. On the other hand, employers should have documented information before approaching a worker who is suspected of having a gambling problem.

“Early detection of this hidden illness may result in the employee getting help before he or she reaches the desperation phase of compulsive gambling. With recovery, both the employee and the employer will benefit.

“We are encouraged to see that some gaming companies have come a long way, in the last few years, by addressing this issue. They have developed training programs and responsible gaming programs and policies that have helped their employees who have a gambling problem.”

Also, Spectrum suggests that the more time and effort that is required to enable an individual to gamble (in terms of planning and actually getting to a venue) could decrease the opportunity to gamble on impulse. Convenience is, therefore, a crucial regulatory issue and this has implications for the location of casinos.

We suggest it would be helpful for Massachusetts to examine the experience elsewhere, and thus we present a relevant case study.

Case study: Australia

Australia appears to have the most comprehensive responses to potential social problems related to the offering of casino gaming. The Productivity Commission²³⁶ estimated that approximately 1 percent of the adult Australian population (around 130,000 people) had “severe problems” with gambling, while an additional 1.1 per cent (160,000) had “moderate problems,” making a pool of approximately 290,000 “problem gamblers,” or 2.1 percent of adult Australians.

Following a public-health approach to problem gambling, many gambling providers have implemented a variety of responsible gambling measures to improve harm minimization and consumer protection in gambling. Approaches taken by the state or territory governments generally have been diverse and fragmented, reflecting varying levels of commitment to reducing the negative social impacts of gambling. These approaches can be grouped into

²³⁶ Productivity Commission (1999). *Australia's gambling industries: Report no. 10*. Canberra: Ausinfo.

legislation, funding, provision of direct services for problem gambling, research, and community education about gambling.²³⁷

- **Legislation:** All Australian state governments have legislated minimum returns to players, outlawed underage and credit betting, and established substantial monitoring and control systems in all jurisdictions. Various states also have different policies on advertisement, management and staff training in responsible gambling, display of problem gambling signage, provision of product information, placement of ATMs, and removal of legal impediments to self-exclusion.
- **Funding:** Most Australian state and territory governments either impose a levy on certain gambling sectors, usually casinos, hotels and clubs, to raise funds for specific community projects including those that address problem gambling, or they fund problem gambling services from a percentage of gambling revenue. The exceptions are Western Australia and South Australia, which rely on voluntary contributions from industry.
- **Direct services for problem gambling:** Governments and industry in most jurisdictions fund two types of problem gambling support services — a network of problem gambling counseling and support services and a 24-hour help line.
- **Research:** Many Australian governments direct a proportion of industry levies to research into gambling, typically into areas such as its social and economic impacts, the effectiveness of harm minimization measures and the efficacy of problem gambling treatment approaches.
- **Community education:** Broad-based education programs aim to minimize harm from gambling through education about responsible gambling strategies, and the risk factors, symptoms and effects of problem gambling. Comprehensive community education strategies have not been implemented in any Australian jurisdiction except Victoria which has had three television, radio and billboard campaigns, each evaluated and linked to impacts on its telephone hotline and other services.

Because many responsible gambling programs in Australia are voluntary, compliance mechanisms are limited, with industry associations and steering committees having few powers to enforce such measures. Where compliance rates are monitored, these usually are based on a self-auditing system, rather than an independent process evaluation. In terms of the effectiveness of the programs in changing players' behavior, to date, no such evaluations of responsible gambling programs have been conducted in Australia. Instead, all existing responsible gambling programs have been developed using a 'top-down' approach, developing practices and processes that are *assumed* to reduce problem gambling and promote responsible gambling.

²³⁷Hing, N. (2006). Gambling and Chinese Culture. In C.H.C. Hsu (Ed.), *Casino Gaming Asia Pacific: Development, Operation, and Impact* (pp. 201-224). New York: The Haworth Hospitality Press.

Recommendations: problem gambling

Spectrum reiterates an important theme that underlies our entire analysis of the impact of new casino development on problem gambling: The critical responsibility for ensuring that public policies adequately address this issue must lie with the bidders for licensure.

Spectrum recommends that the burden of ensuring the efficacy of all policies related to problem gambling be placed upon the applicant. This should be an intrinsic element that would materially weigh on the bidding and approval process. Any casino operator who would consider bidding for a license in Massachusetts must demonstrate a strong commitment to mitigating the negative impacts of gaming on the community. This commitment should also include a comprehensive effort to identify and treat problem gamblers among employees as well.

The fulfillment of corporate social responsibilities and actions to ensure “responsible gaming”²³⁸ extends beyond merely retaining a license to operate. Socially responsible casino management can be expensive, and the benefits of such practices often are not immediately clear. However, given that the legislative proposal would grant regional monopolies to successful applicants, there is both a practical and ethical imperative on their part to act responsibly and with the utmost integrity.

Spectrum’s experience in studying this issue around the world supports the suggestion that the maintenance and continuous improvement of responsible gaming standards will govern the sustainability of the industry. That is, in order to be a viable long-term enterprise, issues such as problem gambling must be addressed effectively. Similar responsibilities are imposed upon the alcoholic beverage industry. The need to develop and maintain a stable customer base that gambles within its means is very real incentive for casino operators to promote responsible gaming.

Responsible gaming occurs as a result of the collective actions and shared commitment among key stakeholders (i.e., gaming industry, government, not-for-profit sector, communities, individuals, and academic researchers) to achieve outcomes that are socially responsible and responsive to community concerns.

Governments in various jurisdictions have begun to require the gaming industry to address problem gambling by developing responsible gaming strategies itself and/or contributing a percentage of their revenues to provide funds for the implementation of responsible gaming strategies. Many gaming operators have done both.

Responsible gambling strategies

The following suggested strategies had previously been developed for Spectrum by Cathy H.C. Hsu of Hong Kong Polytechnic University, who has global expertise in this area.

Responsible gaming strategies can be targeted at three different populations: the general public, patrons, and problem gamblers. Strategies targeting the general public are intended to

²³⁸ “Responsible gaming” is a term that has become widely used in recent years by both the gaming industry and those involved in treating this issue. We suggest that the term serves as an effective shorthand for public and private policies designed to address this issue.

assist and inform people, among all sectors of the population, before they enter a gaming environment and make a decision to participate in gaming activities. Strategies targeting patrons are directed towards customers while they participate in gaming activities. Strategies targeting at problem gamblers focused on those who already display signs of a problem, usually requiring treatment.

Casino operators should focus their efforts on responsible gaming while financially supporting research and services for problem gamblers. There should also be a strong firewall between casino-sponsored research and the people who make decisions on which research projects to fund. This would prevent industry funding from influencing the research agenda and decisions.

Both the government and casino operator must contribute to the overall responsible gaming strategies. Some strategies will need to be initiated by the government, while others need the lead of casino operators. Cooperation between government and the private sector is the key to success. Government may be assisted in this role by private not-for-profit organizations (such as the Massachusetts Council on Compulsive Gambling) that are not associated with the casino industry.

Strategies targeting the general public

These strategies aim to inform the community about the risks of problem gambling and to encourage players to know their limits and to play within their means. These strategies can help reduce possible increases in problem gambling throughout the population even when new gaming venues are introduced. They are more beneficial in the long run than later interventions when problem gambling occurs.

The following strategies can be initiated to achieve the above stated objective:

- Public education and information campaigns should be launched through local media (e.g., radio, newspaper, billboard, poster, television, websites) to provide information on responsible gaming, warn individuals of the risk of excessive gambling, educate the general public about the warning signs of problem gambling, and alert them to where to find help if needed. Research has shown that these measures can lead to increases in the awareness of support and services for problem gamblers, in the number of calls to help lines and in the number of clients seeking help.
- Dedicated websites should be designed for youth, teachers, and parents with information related to responsible gaming.
- The declaration of a “responsible gaming education week” has been tried in other markets to increase awareness of problem gambling, and provide information and tips for practicing responsible gaming. Events like these could also yield a much greater opportunity for media coverage and therefore reach many more citizens.
- The Commonwealth can consider regulations to limit gambling-related advertising in local media. If advertising of gaming is allowed, messages should not depict or promote the consumption of alcohol while engaged in gaming activities.

- The casino/resort complex can offer non-gaming activities/programs and sponsor local community events to provide local residents with alternative recreation options.
- The casino operator should be committed to social responsibility, which extends to seeking an active role in supporting various community and charitable events. The purpose should be to improve the well being of society through a number of significant partnerships with charitable organizations, sponsorships, donations, and philanthropic initiatives involving casino operators, employees, facilities and resources.

Strategies targeting the patrons

These strategies aim to reduce the potential for customers to move from recreational gaming to involvement with problem gambling. This embodies the training and empowerment of employees to promote responsible use and discourage problem play, together with a range of policies and standards to ensure the consistent and responsible delivery of gaming.

The following strategies can be initiated to achieve the above stated aim.

- The casino should cultivate a “culture of responsibility” by ensuring employees receive training in responsible gaming at a level appropriate to their role, supporting objective ongoing research, promoting integrity through sound and ethical business practices, and providing recreational opportunities to social gamblers.
- Casino design can incorporate responsible gaming operation principles, such as providing opportunities for players to take a break from gaming (e.g., food and beverage facilities outside of the gaming area), displaying clocks in the gaming area, and offering adequate non-gaming recreation and leisure facilities on premise.
- With respect to serving alcoholic beverages in the general gaming area, alcohol needs to be served responsibly with guidelines provided to employees.
- Policy on prevention of underage gaming needs to be strictly enforced. No underage patrons should be allowed at any time in any area of the gaming floor. Facility design needs to take this into consideration so that minors will have no need to be near the gaming area.
- Robust self-exclusion programs should be offered where players or their family members can request that they be banned from the casino, removed from the mailing list, and sanctioned if they re-enter the premise. Such a voluntary exclusion program provides problem gamblers with a means to acknowledge that they have a problem and to take personal responsibility for it.
- As noted in the legislation, casinos can provide information kiosks or centers on their premises to distribute information to employees and players, run awareness-raising activities about underage and problem gambling and the importance of responsible gaming practices for employees. Casinos can post help line numbers and brochures (e.g., dispel myths about gambling, help players evaluate their current behavior, and provide information about where to get help) around their properties.

- An effective way to assist potential problem gamblers and minimize the associated harms is to educate them about the risk factors so that those who are at risk either will choose to abstain from gambling or will make a concerted effort to follow the principles of gambling responsibly if they do choose to gamble. And they (or their family members) will at least recognize the symptoms of problem gambling early so that the individuals can work to avoid becoming engulfed by the condition.
- Specialized staff training should be developed to allow casino employees to understand problem gambling, recognize the signs of problematic behavior in customers, and enable them to take the necessary steps to intervene (i.e., knowledge of resources for problem players and assisting those who show signs of problems). Casinos can provide advice on responsible gambling and make referrals to specialist agencies if they feel a player's behavior has become out of control.
- Three levels of training programs are suggested to casino employees. These programs are progressive in nature. Ideally, each program should last for 30 hours. A brief description of each program is provided below.

Basic module

The goal of the basic module is to develop a positive attitude among front-line casino employees to the responsible conduct of gaming. The module should be informative and fun to facilitate employees' learning and broaden their understanding of the gaming industry and its social responsibilities. The basic module will include the following topics:

- Scope and nature of the gaming industry
- Economic and social impacts of gaming
- Gaming operators' responsibilities and their employer's responsible gaming philosophy
- Requirements of relevant laws and house policies
- Types of players and observable signs of distress or problem gambling behaviors
- Customer service in a gaming environment

Advance module

The purpose of the advance module is to equip casino managers with the proper skills to respond to critical incidents involving problem gamblers, in a customer friendly approach. The module, employing both theoretical and practical approaches, should address techniques to interact with problem gamblers as well as manage the gaming area with the presence of a problem gambler. The advance module will discuss the following topics:

- Communication and crisis management skills

- Ability to deal tactfully with gaming related incidents or situations including requests for self-exclusion, underage gambling, disputes or complaints, and involvement of family and friends
- Personality dynamics of problem gamblers
- The psychology of problem gamblers: meaning of money and unresolved personal issues
- Problem gambler counseling fundamentals

Additional suggestion for casino operators

A Code of Conduct for Responsible Gaming should be developed, adhered to, and made known to the public to demonstrate an operator's concern for the society at large and its commitment to corporate social responsibility. The code of conduct should pledge support to employees, patrons, and the public.

The pledge to employees should include providing education, training and information materials on responsible gaming issues, as well as supply contact information for organizations where they can find assistance if needed.

The pledge to customers should include promoting responsible gaming, preventing underage gaming by keeping minors out of gaming areas, serving alcoholic beverages responsibly, advertising responsibly, and the provision of a self-exclusion program.

The pledge to the public includes funding research on gaming and health, using the research results to develop practical ways to improve responsible gaming programs, and conducting regular reviews of the operation to ensure compliance with regulations and code of conduct.

Transportation issues

Transportation is arguably an economic issue, as it affects factors ranging from revenue to employment opportunities. However, we suggest viewing it as a social issue as it largely affects the potential quality of life, and is clearly linked to other issues, such as demands on law enforcement.

Casinos of the size recommended in the administration's proposal will certainly affect the transportation network of surrounding communities. Successful casinos in Connecticut and Atlantic City allow us to project the probable transportation impacts of similarly sized casinos in Massachusetts. For example, the Borgata Hotel Casino & Spa in Atlantic City, which opened in July 2003, is roughly the proposed size and range of what we have assumed in developing our revenue model.

The Borgata estimates that, in its early years, approximately 14,000 patrons visited the property on an average day.²³⁹ In addition to the daily volume of guests, the Borgata workforce

²³⁹ Borgata PowerPoint presentation

(total full-time and part-time of more than 6,000 on-site five of seven days²⁴⁰) adds another 4,300 individuals each day. Since the casino does not operate a busing program, virtually all of the patrons and employees arrive in private automobiles, taxis, or limos. There are 7,100 parking spaces on site, including surface lots and garages for both patrons and employees. In 2007 nearly 2.1 million visitor vehicles parked on the Borgata property, about 5,800 per day. Employee vehicles added to total onsite parking numbers. Obviously, on peak days, such as weekends, holiday, and special events, the annual average is exceeded significantly.

These numbers underscore why a large casino destination requires a comprehensive transportation plan. On site, the facility must have a series of roads, access ramps, and parking facilities designed to move and store vehicles efficiently. It is imperative that its ingress and egress road design should minimize vehicle accumulation. Nonetheless, even under ideal site plan conditions, the street and highway network external to the gaming property will still be impacted by the relatively large volume of vehicles entering and exiting the facility. The magnitude of impact will depend on many factors. The cumulative experience of existing East Coast gaming properties sheds light on what transportation questions should be asked.

Transportation modes and visitor composition

- What percentage of patrons and employees arrive in private automobiles versus other modes of transportation such as charter buses, public transportation, limos, taxis, employee vans/minibuses, and pedestrian movements?
- What is the percentage of overnight guests (who may stay on property for a few days without moving their vehicle) versus day-trippers who come and go daily?

How guests and employees arrive, as well as the visitor composition of day-trippers versus overnight guests have significant impact on traffic patterns in the area. Data collected by Spectrum Gaming Group and its *Gaming Industry Observer* publication indicates that on an average day among patrons of the Borgata and the other two casinos (Trump Marina and Harrah's) located in Atlantic City's Marina District approximately:

- 72.2% are day-trippers who arrive by car
- 26.6% are overnight guests who arrive by car
- only about 1.2% are visitors who arrive by bus

The Marina District of Atlantic City, which includes Borgata, is rather isolated from the resort's general street grid. The district is served by direct ramps connecting the three properties with the Atlantic City Expressway. Visitors from afar can access these casino hotels without ever passing through a signalized intersection. Each property occupies a site with large parking garages. Consequently, automobile access is relatively easy and these casinos have little need to develop busing programs. Moreover, both Borgata and Harrah's have large hotel room inventory relative to casino size. They can therefore market their properties to upscale overnight guests whose vehicles remain on property, thereby reducing ingress and egress movements.

²⁴⁰ New Jersey Casino Control Commission. The employment numbers are current, reflecting significant expansions at Borgata, including the opening of a new hotel tower. The property opened in 2003 with about 4,500 full-time equivalents.

In more heavily congested midtown Atlantic City, casino properties are more likely to emphasize busing programs. Their visitor distribution is as follows:

- 54.1 percent are day-trippers who arrive by car
- 23.4 percent are overnight guests who arrive by car
- 22.5 percent are visitors who arrive by bus

During the 1980s, before hotel room inventory was greatly expanded, most Atlantic City gaming operations relied quite heavily on busing programs. In 1988 nearly 14.2 million visitors arrived in Atlantic City on casino bus programs, more than 40 percent of total annual visit-trips that year. In 2007, largely as a result of intentional downsizing of their busing programs as hotel room inventory increased, casino bus programs brought in 5.4 million visitors, or approximately 16.2 percent of the 33.3 million visit-trips to the resort.

Thus, the future distribution by transportation mode of patrons to the three Massachusetts properties should be viewed as highly fungible. It will depend on many factors, including site location, surrounding street systems and access routes, emphasis on day-trippers versus overnight stays, competition from other regional casino or racino busing programs, and general marketing strategies. But it is safe to assume that the large majority of patrons and employees will arrive by automobile.

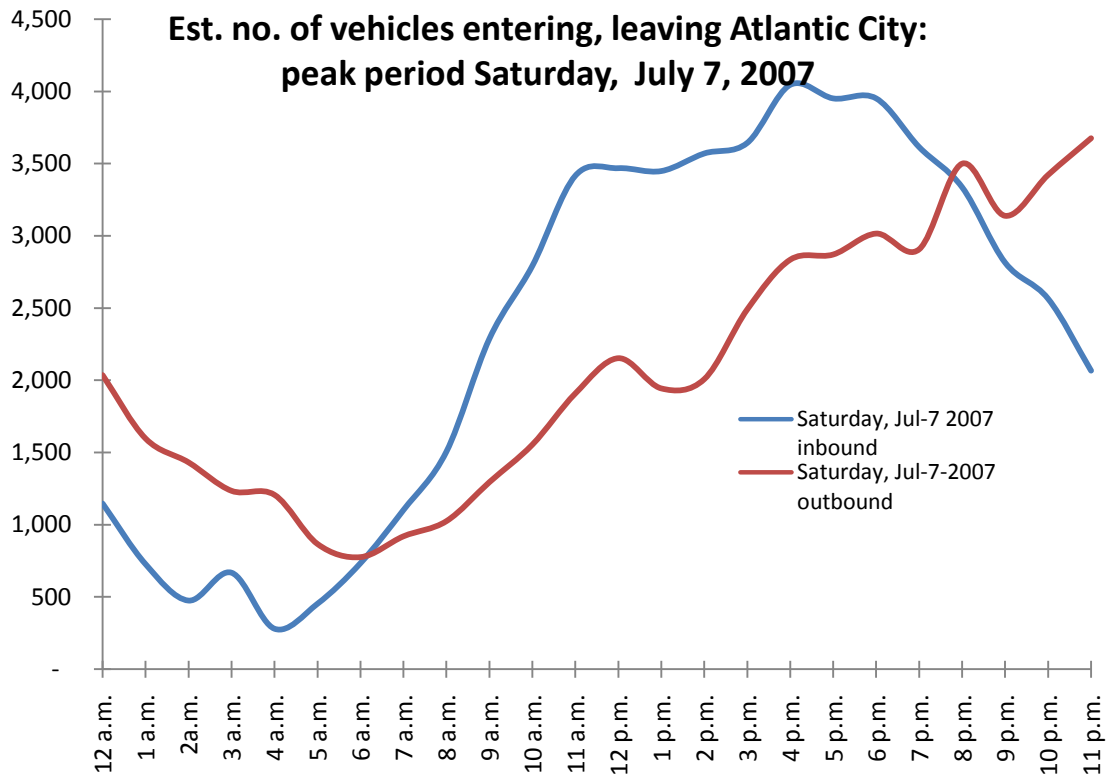
The following questions need to be considered when evaluating transportation impact

Peak hour factors

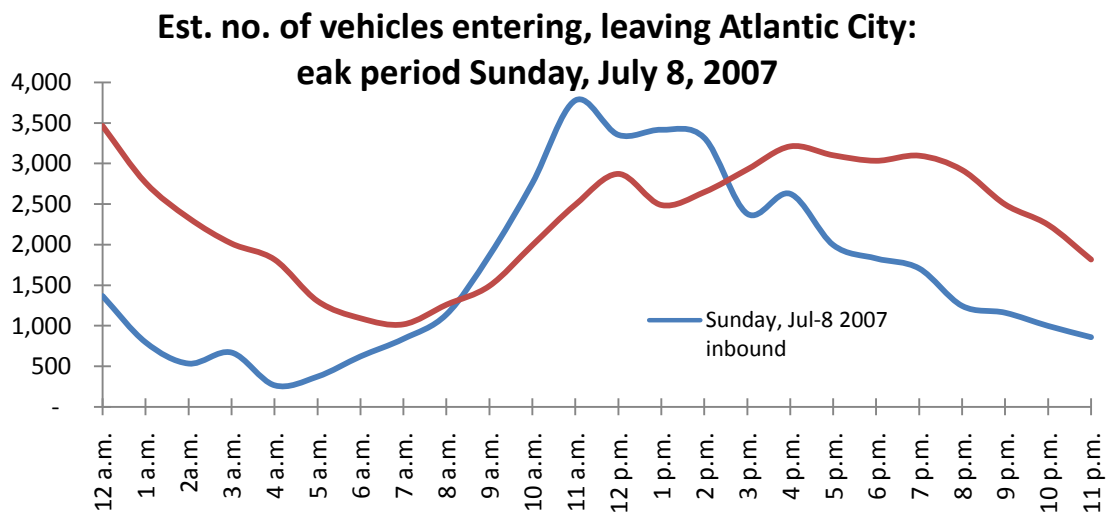
- How might employee daily shift changes affect traffic patterns in the surrounding community?
- What is the hourly flow of traffic to and from the facility? When does the gaming property experience peak hours of traffic?
- How do those peak hours vary by day of the week, holidays, and special entertainment events?
- Are there major seasonal variations in traffic flow?

These questions are inter-related. For example, the employee shift change is a factor that should not be overlooked. A new facility of the size suggested in the Governor's proposal will have at least 4,000 employees, probably more when part time workers are factored in. If the casino is a 24 hour operation, careful planning of shift size and shift changes can reduce the amount of employee vehicles mixing with pre-existing community peak hour traffic patterns. For example, many Atlantic City casinos schedule weekday shifts from 7 a.m. to 3 p.m., instead of the 8 a.m. to 4 p.m. "normal" shift hours of many day workers in other industries. This helps to reduce the impact of casino employee traffic on congestion experienced during morning and afternoon rush hours.

Data (see below) from the South Jersey Transportation Authority for the Atlantic City Expressway, which is the main road into Atlantic City, clearly shows how casino-destined vehicles influence hourly traffic patterns during peak periods. We note that the patterns exhibited here for the July 4th weekend last year are similar to those of previous years.



Source: South Jersey Transportation Authority



Source: South Jersey Transportation Authority

While traffic into the resort is moderate during what is considered normal morning rush hours, these charts show that on weekdays, peak inbound hours on the Expressway occur in the late morning-early afternoon time interval. These hours correspond with the arrival of both day trippers and overnight guests who typically cannot check into their hotel rooms until 3 p.m. Outbound from the casinos, the peak weekday hour is 3 p.m. to 4 p.m., not the usual 4 p.m. to 6 p.m. rush hours experienced in most urban areas. The outbound peak, as stated above, is influenced by large numbers of casino employees coming off shift at 3 p.m. Adding to this hour's outbound traffic are overnight guests who check out at mid-day and either gamble or enjoy a late lunch before loading up the car and heading home. But shifting many exit trips to the 3 p.m. hour has the positive effect of spreading outbound weekday traffic over three hours, rather than the customary two, with the result of no major congestion during any of this time interval.

On weekends, most American urban areas enjoy limited traffic congestion at any hour, except perhaps in the summer on Sunday evenings as motorists head home from resort areas. Atlantic City, a resort community, experiences significant traffic movements in either direction on both Saturdays and Sundays, especially in July and August. But there is a remarkable continuity over many hours for inbound traffic. Traffic volumes typically begin to climb in late morning and continue more or less at similar levels for many hours into early evening. Major inbound congestion usually occurs only on Saturdays, particularly during summer season, between 6 p.m. and 8 p.m. as vehicles converge on the city whose passengers will attend headliner shows, dine in the many casino restaurants, and of course gamble.

Leaving Atlantic City, peak outbound hours on Saturdays occur in late evening. Often the period between midnight and 1 a.m. is the peak outbound hour, a time when non-casino traffic is minimal.

Sunday hourly inbound traffic in Atlantic City mirrors Saturday patterns, with the exception that traffic falls off in late afternoon and evening while on Saturdays it does not. Outbound, especially in summer, traffic may build as early as 10 a.m. and continue increasing through the afternoon and early evening hours. During the summer season, traffic on the Atlantic City Expressway is often more heavily influenced by vehicles going to or coming from the beach resorts north and south of Atlantic City.

The key lesson to learn from Atlantic City traffic volumes on weekdays is that peak hour casino patron and employee traffic does not correspond to typical weekday rush hour traffic patterns in most other communities. Consequently, especially for a casino proposed for an urban or suburban environment, the new traffic it generates might not interfere dramatically with existing rush hour traffic. Similarly, while traffic volumes at a casino on Saturdays and Sundays will be heavy, those are days where community traffic is typically less than weekday traffic.

Traffic on neighboring streets and highways

- Does the property have an efficient internal road and parking network to ensure that vehicles can quickly enter/exit the facility without contributing to or causing traffic congestion in the surrounding community?
- How might pre-existing traffic patterns in the area be altered by the additional traffic of a new casino property, particularly during peak hours? Will casino traffic disrupt local neighborhoods, or exacerbate existing blockage?

- What infrastructure improvements may be necessary to minimize adverse traffic impacts in the street grid near the casino? Will major upgrades of existing traffic signal equipment and dedicated turning lanes from existing streets be necessary?

In Connecticut, Mohegan Sun and Foxwoods are relatively close to each other, which compounds traffic management issues. In Atlantic City, situated on a small island, 11 large casino hotels generate substantial traffic movement every day of the year. Consequently, both Connecticut and New Jersey have had to devote major resources to ensure that local streets and state highways can cope with the added volume of vehicles. In Atlantic City at present, the Casino Reinvestment Development Authority is funding a study of transportation improvements that will begin with adjusting street traffic patterns²⁴¹.

As discussed above, a key element is to make it possible to enter and leave the casino hotel property with minimal traffic disruption to local street and highway systems. Typically, this requires updating intersection signal systems and installing dedicated turn lanes to ensure that pass by traffic is not unduly obstructed.

It is important to note that the plan to award just one license in each of three separate areas of Massachusetts greatly reduces the potential for the congestion experienced in Connecticut and New Jersey. Another factor to consider is that one large stand-alone casino hotel will have traffic patterns comparable to a large regional shopping mall. Visitors usually arrive at both malls and casinos after 10 a.m. in the morning. Their vehicles are thereby not adding to morning workday rush hour traffic volume which usually is concentrated between 7 a.m. and 9 a.m. Traffic leaving a casino, like leaving a regional mall, typically spreads out over afternoon and evening hours. Often malls, like casinos, experience their heaviest concentration of traffic on holidays and weekends, periods when community work traffic is nominal.

Macro-transportation factors

- Is the new facility located in close proximity to an existing superhighway or multi-lane surface arterial? Will major highway improvements and ramp construction be necessary?
- Is public transportation nearby? If not, what is the potential for linking the new facility to surface bus routes and light or heavy rail systems?
- What percentage of casino visitors will arrive in the region by air, and how will they be transported from the airport to the gaming facility?

Each of the three potential destination casinos in Massachusetts would clearly be required to develop marketing strategies to attract regional and long distance travelers. Access to each property will of course be maximized if suitable locations are found near the Massachusetts Turnpike, an interstate highway, or multi-lane highway. A good example of ideal highway access is the Oneida Nation's Turning Stone Casino Resort located between Syracuse and Utica adjacent to what was formerly the low volume Exit 33 of the New York State Thruway in the town of Verona. The surrounding area is basically rural. Turning Stone is less than two miles from Exit 33 on state Route 365. With minimal improvements to the Thruway exit area and to

²⁴¹ Spectrum has been retained by CRDA in an advisory role on that project.

the short stretch of Route 365, the casino hotel is easily accessed via the Thruway from all of the urban and suburban communities of upstate New York.

In Pennsylvania, the recently opened Mount Airy casino in the Poconos is located near I-80. The Sands Bethlehem casino, scheduled to open in 2009, will occupy a site near I-78. Both properties because of their proximity to major interstate highways perceive themselves to be positioned to attract visitors from the lucrative North Jersey and New York markets.

The three specific sites ultimately chosen in Massachusetts may or may not enjoy similar ideal superhighway access. For example, State Senator Anthony Petrucci commissioned a study that estimates the cost of improving the Route 1A corridor that connects Copeland Circle in Revere to the Sumner-Callahan tunnel – which already experiences regular rush-hour traffic jams – would cost \$420 million. A casino in that area would make the problem more acute.

In addition to highway access, other advantages such as potential linkage to public transportation systems should be considered, including locations near light or heavy rail stations. Convenient public transportation would greatly assist employee recruitment and retention, attract certain segments of the visitor market, and generally help reduce vehicular movements in the neighborhood of the casino/hotel.

For example, by reopening the Philadelphia-Atlantic City rail line in the 1980s, New Jersey transportation official provided an alternative for visitors, and just as importantly employees, to abandon their cars and travel to Atlantic City on heavy rail. New Jersey Transit, operators of the line, has a contract with the Atlantic City Jitney Association to link each arriving and departing train with free jitney service (mini-buses) with all 11 casinos. Ridership has been steadily increasing, although the rail contribution to total visitor volume to Atlantic City is still very small.

All of the transportation issues discussed above need to be factored into the site selection process. But once the Massachusetts sites are chosen it is critical that public authorities and casino representatives work closely with community groups to answer all questions and allay the perfectly normal concerns of the communities that will be impacted by casino traffic. Anticipating that significant infrastructure improvements may be needed, the administration's plan correctly establishes a set-aside fund from casino tax revenue dedicated to transportation improvements and a mitigation fund to compensate host and surrounding towns for costs incurred to accommodate the resort casinos.

Transportation plans, which must be an essential element in any consideration of licensure, should be weighed in concert with all other elements of the bidding process. For example, plans to ensure that employment opportunities are targeted to existing Massachusetts adults who are unemployed or under-employed must include plans to provide affordable transportation to and from communities where such adults reside.

The Foxwoods-Mohegan Sun contrast in Connecticut

The experience in Connecticut provides cautionary guidance in the siting of a destination casino resort. Mohegan Sun in Montville has significantly easier access than Foxwoods, which is across the Thames River in Ledyard. For most patrons, the approach to Foxwoods involves an-

eight mile trip along a two-lane state road, Route 2, off Interstate 95. It can take 15 minutes without traffic. With traffic, it can take more than a half-hour.

In sharp contrast sits the Mohegan Sun, less than a mile off Interstate 395. The casino developers funded a \$29 million widening of Route 2A to four lanes and added an interchange at Mohegan Sun Boulevard for patrons to drive directly to the casino. The project was finished in time for the casino's opening in October 1996. The result: 95 percent of drive-in patrons arrive at Mohegan Sun via Interstate 395,²⁴² thus avoiding local roads. Mohegan Sun executives acknowledge that easier access from Interstate 395 provides their facility with a competitive advantage over Foxwoods.²⁴³

Ledyard Mayor Fred Allyn Jr. said the Mohegan tribe did a good job making egress and ingress painless. "It's a pleasure to go over there. You shoot in and shoot out easily. It is a whole different story with Foxwoods," Allen said.

Allyn noted that Route 2 itself is maintained by the state so that local resources are not expended. He and others, though, argue that the highway is not maintained as well as it should be and it is incapable of handling the traffic that currently travels on it. In fact, the road is so congested that local feeder roads often become backed up with motorists trying to get onto Route 2.

Foxwoods is currently improving access at its casino, but improvements to Route 2, if they are ever undertaken, are years away, according to James Butler, executive director of the Southeastern Council of Governments. Even when the improvements are undertaken, Butler noted, that there are no plans to widen the two-lane highway into four lanes.

Meanwhile, the Route 2 feeder roads continue to deteriorate. Allen said local funds are constantly used to resurface and repair those roads. For example, he noted that Ledyard plans to spend nearly \$750,000 this year to resurface Shewville Road, on which many Foxwoods employees commute.

Traffic volumes from 1992 to 2005 have nearly doubled along some sections of Route 2 in southeastern Connecticut, especially the eight-mile section between Foxwoods and Interstate 95.²⁴⁴ Several sites along the highway are considered "only marginally adequate" to handle traffic flow.²⁴⁵

Preston Selectman Jerry Grabarek, a dairy farmer, knows firsthand how difficult it can be to cope with the increased traffic. His farm at Route 2 and Hewitt Road lies between an employee parking lot and a storage facility for Foxwoods. Traffic can be so heavy that Grabarek has to wait 10 minutes in his pickup truck to cross between his barns and his house.²⁴⁶

North Stonington First Selectman Nick Mullane said more and more Foxwoods' patrons are coming off of Route 2 into his town to get to Foxwoods. And thousands of employees at Foxwoods use North Stonington roads to get to work. There has been an enormous amount of

²⁴² Interview with Jeffrey Hartmann, Executive Vice President and Chief Operating Officer, Mohegan Sun, June 19, 2008

²⁴³ Interviews April 16, 2008

²⁴⁴ Southeastern Connecticut Council of Governments Regional Transportation Plan FY 2007-2035

²⁴⁵ Ibid

²⁴⁶ Hartford Courant, May 27, 2005

wear and tear on downtown streets and the increased traffic has resulted in more traffic accidents, Mullane added. “Before the casino in Foxwoods, we had one traffic light. Now we have nine,” he said.

There has been a tremendous impact on the infrastructure. North Stonington used to hire part-time constables to address traffic issues, Mullane said. That’s no longer possible due to the increased traffic, he noted, adding that the town has had to pay for the salaries of at least two additional police officers.

Mullane said the town’s business community has not benefitted from the increased traffic through the downtown area. Gas stations and donut shops are doing well but that’s about it, he said. “We’ve actually lost business. It is a shame that Foxwoods had to be built where it was, but there’s nothing anybody can do about it now,” he said.

Mullane said he believes that the improvements being undertaken at the entrance to Foxwoods will make things worse, not better. He fears that motorists using the flyway will fail to slow down once they get into North Stonington, causing more accidents to occur.

Interstate 395, serving Mohegan Sun, is not without its share of problems. It, too, is beginning to show signs of stress, especially at interchange areas.²⁴⁷ But the problems pale in comparison to those experienced along Route 2.

Relevance to Massachusetts

The contrast in access between the two Connecticut casinos should guide the Commonwealth of Massachusetts when it examines the siting of casinos. Casinos on or near high-volume highways can cause less disruption to the host and surrounding communities; casinos nestled among towns, farther from high-volume highways, can cause considerable disruption in terms of traffic, quality of life, and maintenance costs.

Proximity to a high-volume highway may facilitate access to a destination casino but it would not necessarily eliminate the traffic burdens on neighboring towns. Town of Monson Selectmen Edward Harrison and Kathleen Conley Norbut, for example, said that they fear that a casino along the Massachusetts Turnpike in neighboring Palmer (a proposed casino site) would prompt casino patrons with local knowledge, as well as casino employees, to drive on Route 32 through the heart of Monson, clogging the otherwise quiet village.

Likewise, Sturbridge Town Administrator James Malloy said that township officials fear that patrons headed northwest for a casino in Palmer would avoid the Turnpike and instead cut through Sturbridge and “bog down traffic” on Route 20 and side roads.

(We are not offering an opinion on Palmer or another specific town or site as a casino location, but using it as one example of issues involved in siting.)

In this vein, the Commonwealth, local planners and developers must consider the casino access points from all directions. That is, they must examine whether patrons from the close-in

²⁴⁷ Ibid

markets would logically bypass the major highways and use “shortcut” roads through towns, and they must examine which roads would be used by commuting casino employees.

Recommendations: mitigation funding

The legislation that we have analyzed contemplates using 2.5 percent of gaming revenue as mitigation funding for host communities. The requirements for such funding will depend on the specific locations, and will vary by the type of gaming property contemplated, as well as other factors from ease of access to levels of employment, to whether or not a property is in an urban or rural location.

We suggest that certain steps be taken to ensure that adequate funding is available for local communities. These include:

- Applicants for licensure should bear the burden of minimizing the impact on local communities. Such steps would require the applicants to bear the burden of proof that they have selected an optimal location that offers sufficient access to both patrons and employees, and that the property is pursuing marketing and other strategies designed to minimize such impacts.
- Law-enforcement responsibilities on the casino floor should be handled at the state level, with minimal demands on local law enforcement. This should include the cost of handling any prosecution of crimes on the casino floor, as is done in other states.
- The responsibility to minimize the need for mitigation funding should be held jointly by the operators and the public sector. To do this would require that applicants seek out sites that minimize the need for such funding, and that steps are taken – such as hiring the currently unemployed – to ameliorate any potential impacts.
- The public sector must recognize that not all types of communities will be impacted in the same way, so a one-size-fits-all funding formula might not prove effective once casinos are operational. Indeed, this requires that public officials adopt an expansive view as to the type of communities that would be impacted, and should not limit funding to only communities that host gaming facilities.

Absent information regarding specific casino sites, it would be impossible to determine whether or not 2.5 percent of gaming revenue would be sufficient to address the needs of all impacted local communities. With that in mind, we respectfully suggest that lawmakers adopt a flexible approach to funding, with 2.5 percent being a guideline rather than a fixed amount. Some communities might require more; others less.

Section V: Gaming Regulation

Overview of regulatory issues

For various reasons, casino gaming is one of the major worldwide growth industries, and that expansion of gaming has continued into the first decade of the new century. Legalized gambling has existed in Nevada for more than 75 years, in New Jersey for more than 30 years and has been expanded to most of the states in the United States.²⁴⁸

Both the governments that legalize casinos and the casino industry face challenges in jurisdictions either expanding legalized gaming activity or considering casino gaming for the first time. The challenge for government is to put into place effective controls to oversee gaming and to maintain the will to regulate the industry for the public benefit. There is a direct nexus between effective regulation of the gaming industry and the long-term success of casinos. For the reasons discussed in this section of the report, those jurisdictions that create effective regulatory controls will not only protect themselves but will also provide a strong foundation for investment in the gaming industry.

The remainder of this section will focus on those standards that gaming jurisdictions should consider in regulating and controlling casinos. In just about every successful jurisdiction that has legalized casino gaming, that activity is highly regulated. The elements of effective casino regulation include various operational controls and licensing of those companies and individuals who participate in the gaming industry. The goal of licensing is to ensure that only those companies and individuals who meet the standards of the particular jurisdiction actually receive a gaming license, that organized criminal elements are kept out of the ownership and operation of the casino industry and vendors that service casinos, and that otherwise unqualified companies and individuals do not receive a casino license. Additionally, from an operational perspective, the goal of casino regulation is to ensure that all monies are accounted for, the casinos are not used to launder money, and that the games are operated fairly.

Many jurisdictions have also incorporated in their gaming legislation public policy goals relating to the regulation and oversight of gaming including some or all of the following:

- 1) Strict regulation of the industry, including detailed provisions pertaining to licensure, ongoing regulation and taxation;
- 2) Framing the granting of a casino license as a privilege that can be revoked by the government if circumstances so warrant rather than as a right or entitlement. In this way, the holder of any type of license is placed on notice that it must conform its conduct to certain standards;
- 3) Creation, by the enabling legislation, of an independent agency to oversee gaming activity. Alternatively, the oversight of gaming should be placed in an agency or cabinet department with sufficient authority to effectively regulate gaming activity. In either event, the regulatory agency should have law enforcement powers and should be isolated,

²⁴⁸ Every state in the United States except Hawaii and Utah has legalized some form of gaming.

to the extent possible, from the political whims of the day. The powers typically granted to regulatory agencies include:

- Investigation of the qualifications of casino applicants
 - Issuance of casino licenses and permits
 - Promulgation of regulations
 - Investigations if violations of the gaming act and regulations
 - Initiation of regulatory compliance actions
 - Continuing reviews of casino operations
 - Financial and operational audits of casino operations
 - Hearings and adjudication of licensing and other cases
 - Collection of fees and penalties
- 4) An all-encompassing and continuing obligation of individuals and companies who want to participate in gaming activity to disclose information to the appropriate regulatory agency. A subcomponent of this category is that those companies and individuals applying for a casino or vendor license should be required to pay for all costs associated with the conduct of their background investigations. This requirement allows the regulatory agency to undertake what are often complex and multi-faceted entity and other investigations without having the taxpayers of the state pay for these types of investigations.
- 5) A strict code of ethics under which regulatory agencies and senior government officials should operate so that actual and perceived conflicts of interest can be avoided and the regulatory decisions can be made on the basis of merit.

Casino licensing

One of the fundamental methods to preserve the integrity of casino gaming is an effective and comprehensive licensing process. Licensing standards are designed to allow regulatory agencies to perform these functions and maintain public confidence in the integrity of the process.

Licensing standards are commonly divided into affirmative and disqualification criteria. Many jurisdictions require that applicants for a casino, vendor and employee license affirmatively demonstrate qualifications for licensure. For example, an affirmative demonstration of good character, honesty and integrity for a designated period prior to licensure is a common feature of the licensing process. Generally, a demonstration of financial stability, responsibility and integrity relating to financial solvency, viability and honesty in business dealings is also required.

Disqualification criteria permit a casino regulatory body to deny a license even if the affirmative criteria have been met. Failure to provide information, failure to reveal material facts, or supplying false or inaccurate information are generally independent bases to deny licensure. However, not every failure to disclose information may lead to a licensure denial. For example, a failure to disclose must generally be willful or show a conscious disregard for the regulatory

process; an inadvertent failure to disclose a non-material fact would not usually mandate automatic disqualification.

Other disqualification factors typically relate to criminal conduct and convictions. Convictions of certain offenses, generally felonies or first or second degree crimes, within a specific period of time, usually 10 years preceding the date of the casino application, results in automatic disqualification. Disqualification is also usually mandated if an applicant is a career offender, a member of a career offender cartel or an associate of a career offender cartel. Involvement in the illegal drug trade would also be a basis for denial.

The licensing standard discussed above safeguards against infiltration of organized crime or other undesirables through the ownership or management of a casino. Qualification standards ensure that all individuals who have control or influence over the corporate structure of a casino licensee satisfy minimum standards for licensure.

The scope of the licensing process is important to note as well. Typically for casino entity licensing, the individuals who are required to file application forms include:

- Members of the Board of Directors
- Major stockholders owning 5 percent or more of the casino company or its parent company
- Company officers
- Key employees

Similar standards typically are applied to companies that engage in business activities with casinos and for casino employees.

Corporations and their board of directors, major stockholders of the casino companies, financial sources, casino service industries and casino employees are typically subject to licensure. Once a casino applicant receives a license, the licensee remains under government scrutiny, and its operations are subject to review, audit and regulation.

The standards discussed above are used by most gaming jurisdictions but the interpretation of these standards can differ among jurisdictions. Nevertheless, the basic goal of barring organized crime and undesirables from the industry and determining the “suitability” of applicants remains a universal goal of credible gaming jurisdictions. Strict licensing standards and their implementation has been successful in frustrating hidden casino ownership and ensuring that only qualified individuals are licensed and employed in the casino industry.

Operational controls

Once a casino applicant has been licensed, it is important to monitor and regulate casino operations. Elements of effective casino control typically relate to:

1. Adoption and implementation of minimum accounting and other internal controls through the adoption of regulations
2. Generally uniform rules of the games
3. Effective oversight by casino supervisors
4. Internal controls for slot machines

5. Anti-money laundering controls
6. Viable surveillance
7. Regulatory oversight

The first element of effective control in casino operations relates to a system of minimum accounting and other internal controls (MICS) designed to safeguard casino assets. To the extent possible, MICS should establish accountability of casino revenues and pinpoint areas and individuals responsible for such funds during the gaming day.

The second aspect of casino control relates to having uniform and defined rules of the game for each game offered by the casino. Uniform substantive rules of the game permit casino supervisors and regulators to identify any deviations, which may indicate cheating or tampering with the games.

The third aspect of casino control relates to internal controls related to gaming equipment including casino chips, cards, dice, dealing shoes and casino software.²⁴⁹

The fourth aspect of casino control relates to slot machines. Electronic games are unique and subject to unique forms of tampering and cheating. Effective controls over slot machines start with the testing of the slot machines by a laboratory, either independent or state operated, to determine the randomness of the gaming related computer chips and to determine whether the payouts are fair. The next step includes an aggressive inspection program to ascertain whether tampering has occurred. A final step relates to the verification of slot machine jackpots to make sure they are legitimate.

The fifth aspect of effective gaming control relates to anti-money laundering programs. Since 1985, casino gaming has come under the requirements of the Bank Secrecy Act. At that time, casinos were deemed to be financial institutions under this federal law. Specific requirements have been established through regulations issued by the Financial Crimes Enforcement Network (FinCEN) mandating the filing of Currency Transaction Reports (CTRs) and Suspicious Activity Reports (SARC). Many states have adopted parallel regulations that require the filing of CTRs and SARCs with state gaming regulators.

The final aspect of casino control relates to the clandestine surveillance of gaming operations by management and regulators. Surveillance personnel act as a check and balance over casino personnel on the casino floor and provide an independent level of review and observations. The surveillance department should operate independently of the management of the casino and should report to the casino entity's Board of Directors or Audit Committee, or both.

The element that ties all of the above together relates to an effective regulatory process. As noted, regulatory agencies should have full authority to conduct reviews, audits and observations of all aspects of a casino's operations.

The model of regulation described herein has proven to be effective for casino operations in many countries, including the United States, Australia, and some in western Europe. It serves

²⁴⁹ The development of casino software to track patron play and audit various aspects of the gaming operation has made MIS auditing a critical component of the regulatory process. Regulators, as well as operators, need to know and understand this technology in order to effectively regulate modern gaming operations.

to create public confidence in casino gaming and has led to the investment of billions of dollars in physical facilities and the creation of tens of thousands of jobs. There is no reason why the same goals and objectives could not be realized in Massachusetts.

Case study: Singapore

Singapore has not yet opened either one of its two planned integrated resorts, yet is already being defined positively by the expected success of its gaming industry. Singapore's economy grew by 8.2 percent in the quarter ending June 2007, led by a 17.9 percent growth in construction. In chronicling that growth, the *Financial Times* reported: "Lee Yuan Kew, Singapore's elder statesman, recently predicted that the city-state was poised for a 'golden age' over the next five years, owing to its transformation into a private banking and gaming center."²⁵⁰

Spectrum has been intimately involved in the planning and development of Singapore's gaming industry, having served as consultants to the Ministry of Home Affairs in advance of issuing licenses for the two planned integrated resorts. The following summarizes the Singapore experience to date.

Decision to Allow Casinos

The United States provided a backdrop in the decision by Singapore to allow casinos. In June 1999, the U.S. National Gambling Impact Study Commission (NGISC), established by President Clinton in 1996, delivered its Final Report to Congress. The report collated two years of comprehensive legal and factual study of the social and economic impacts of gambling in the United States. The basic issue addressed by the commission was simple: "Gambling, like any other business, creates both profit and jobs. But the real question ... is not simply how many people work in the industry, nor how much they earn, nor even what tax revenues flow from gambling. The central issue is whether the net increases in income and well-being are worth the acknowledged social costs of gambling."

At the time when the NGISC delivered its report it was simply inconceivable that, within five years, Singapore would allow casino gambling. For decades, government policy had opposed resolutely any and all calls to legalize casino gambling, a position that was also seen to be aligned with public opinion on the issue. In late 2003, opponents of casino gambling seized upon the case of Chia Teck Leng, the former finance manager of Asia Pacific Breweries, who was accused of embezzled more than S\$110 million (US\$70 million) as he became mired in debt through gambling in casinos around the world. In April 2004, he was sentenced to 42 years in jail in what was Singapore's biggest ever case of commercial fraud.

Yet in April 2005, a proposal to develop two multi-billion-dollar integrated resorts, each including a casino, was approved at a special meeting of the Singaporean Cabinet, following an earlier government call, in late December 2004, for interested developers to submit concept plans for such resorts; 19 responses were received.

²⁵⁰ "Construction Boost for Singapore," *Financial Times*, July 11, 2007, p. 2.

In March 2005, Minister Mentor Lee Kuan Yew was briefed on the 19 proposals, and the next month, following four days of parliamentary debate, a formal announcement was made by Prime Minister Lee Hsien Loong in a speech that emphasized the pressing need for Singapore to take positive action in the face of clear indications that the country was losing its attraction as a tourism destination.

Deputy Prime Minister and Minister of Home Affairs Wong Kan Seng drew upon the NGISC report in a statement to Parliament, also made on 18 April 2005, in which he said: “The (report) analyzed data from 100 communities with varying degrees of proximity to casino gambling and concluded that casino gambling has had no effect on the rates of serious violent or property crimes.”

The decision to develop integrated sites at Marina Bay near the downtown city center and on the resort island of Sentosa reversed decades of official antipathy to casino gambling and was reached only following considerable discussion and public consultation. The Parliamentary debate saw many Members of Parliament share their concerns on gambling, and followed more than a year of vigorous public discussion on the subject.

Significant differences of opinion still exist within Singaporean society, with concerns focused primarily on the social implications of legalized casino gambling.

Against this backdrop it is noted that the decision to proceed with two integrated resorts came as major global casino operators are turning to Asia for expansion, attracted partly by the explosive growth seen in Macau. Between 1993 and 2002, visitor arrivals to Singapore averaged between 6.5 million and 7.5 million visitors; over the same period tourism receipts fell by 17 percent, from S\$11.3 billion to S\$9.4 billion, reflecting a corresponding fall in the contribution of tourism to GDP from 6.1 percent in 1993 to 3 percent in 2002. At the same time, however, the Asia Pacific region as a whole recorded year-on-year growth in tourism traffic of more than 6 percent. Over the course of this 11-year period Singapore witnessed a decline of more than 50 percent in its share of regional tourism receipts from 13.1 percent to 6 percent. In 2005, the tourism sector generated an estimated S\$10.8 billion in tourism receipts.

The integrated resort developments are regarded by the government therefore as essential components of the strategic drive to double tourist numbers to 17 million a year and significantly enhance annual spending by tourists. They are primarily envisaged to be iconic lifestyle developments showcasing a comprehensive range of world-class amenities including hotels, convention facilities, retail and dining, entertainment shows, themed attractions and of course casinos. The strategic objective is to broaden domestic leisure and entertainment options to enhance Singapore’s reputation as a premium “must-visit” destination for leisure and business visitors.

It is the government’s intention that the gaming resorts will have a compelling mix of non-gaming attractions, with casino gaming revenues constituting a minority component of total resort revenues. It is expected that international patrons, instead of local residents, will contribute the greater proportion of total gaming revenues.

In his speech, Prime Minister Lee noted that the Marina Bay and Sentosa sites attracted two very different types of proposals. The Marina Bay was deemed most suitable for a large business and convention facility specifically targeting MICE (Meetings, Incentive tours,

Conventions and Exhibitions), while the Sentosa site was identified as more suitable for a family-friendly resort.

The total investment earmarked for both sites will exceed US\$ 7 billion. Gaming will occupy no more than 5 percent of the total floor area of the Marina Bay and Sentosa developments. The Ministry of Trade & Industry further estimates that, combined, the two gaming resorts will create some 10,000 direct jobs and indirect employment for a further 25,000 people. The contribution to annual GDP is expected to be in the region of S\$1.5 billion.

Singapore regulatory framework

In parallel with the decision to proceed with the IR projects, the government of Singapore has also worked to develop a transparent and effective regulatory framework to govern the operation of the casino components of these projects. Central to this is the Casino Control Bill, a 150-page document that was passed by the Singaporean Parliament in February 2006, and which came into force in June 2006.

In drafting the bill, the Ministry of Home Affairs (MHA) studied the regulatory practices of well-known casino jurisdictions in other parts of the world, including both multi-casino jurisdictions, such as Nevada and New Jersey; and single-casino jurisdictions, such as New South Wales and Victoria in Australia and Macau. MHA officials, including the Minister, Wong Kan Seng, visited casinos and regulators in Las Vegas, Macau and Australia to learn from their experience.

The draft Casino Control Bill was subject to public consultation in late 2005, and potential investors in the IR projects were also invited to provide feedback. In addition, the Singaporean government sent the draft to regulators in the United States and Australia for comments. The ultimate goal, as expressed by Minister Wong when presenting the Bill to Parliament, was simple: “We aim to position our integrated resorts with the best in the world. Our regulatory standards must necessarily be on par with theirs too.”

The objectives of the Casino Control Bill are primarily to ensure that:

- The casinos remain free from criminal influence or exploitation
- Gaming in the casinos is conducted honestly
- The potential of casinos to cause harm to minors, vulnerable persons and society at large is minimized

The provisions of the Casino Control Bill will be implemented through two bodies, the Casino Regulatory Authority of Singapore (CRA) and the National Council on Problem Gambling (NCPG). The CRA will adopt primary responsibility for regulation, licensing and investigation, inspection and enforcement, adjudication of disputes between the casinos and patrons, and evaluation and audit of the casinos’ internal controls. The NCPG, which has already been established by the Ministry of Community Development, Youth and Sports, will be responsible for actions including the promotion of public awareness of problem gambling. The NCPG will also be empowered to exclude persons from the casinos.

The Bill also sets up a dedicated Casino Investigation Branch within the Criminal Investigation Department of the police to detect and investigate crimes that take place in the casino.

Each integrated resort operator has been granted a 60-year tenure over the land and awarded a concession to operate a casino for 30 years; this concession is independent of a casino license, for which the operator must apply to the Casino Regulatory Authority.

The Singapore Tourism Board has further stated that for a period of 10 years from the date of the signing of the second integrated resort agreement, only two casino licenses will be issued.

For each resort, the Controlling Shareholder, defined as the single entity that owns the largest direct and indirect stake of the voting shares, will not be permitted to hold an interest or a management contract for operating the casino in the other integrated resort. The resort operator can apply for the casino license only when at least half of the proposed gross floor area is ready to receive visitors and at least half of the committed investment has been expended. The operator is then required to expend 100 percent of its committed development investment within three years of the date of issue of the casino license.

The Casino Control Bill contains a number of provisions intended to control access to the two casinos by Singaporean nationals and permanent residents, primarily through a minimum age restriction and a requirement that these patrons pay either a daily or annual entry fee to gain access to the properties.

- The social safeguards delineated by the bill include:
- Entry prohibited to the casino for those below 21 years
- A casino entry levy of S\$100 (US\$65) per day or S\$2,000 (US\$1,300) per year for Singapore residents
- Provision of self and third party exclusion schemes (including requests by family members)
- Requirement to display information on problem gambling, help services, rules of games and odds of winning
- Restrictions on advertising of casino and casino gambling
- Restrictions on extension of gaming credit to Singapore residents, with the exception of premium players
- No automatic teller machines allowed within the casino
- Provision of a system to allow loss limits to be set voluntarily

Section 108 of the bill also prohibits casino and junket operators from extending credit to Singapore nationals and permanent residents, unless they maintain a credit balance of at least S\$100,000 (US\$65,000) with the casino operator at the start of their gaming, this being the sum needed to qualify as a premium player.

The legislation also requires the casino operator to put in place a robust anti-money laundering program that includes know-your-customer due-diligence, mandatory reporting for transactions above S\$10,000 (US\$6,500) and record keeping for transactions above S\$5,000 (US\$3,250).

Tax will be levied at 15 percent on monthly gross gaming revenue from mass market players, and 5 percent on monthly gross gaming revenue from VIP (premium) players. The Singaporean government has committed not to raise casino tax levels for at least 15 years.

Gross gaming revenue will also be liable to Goods & Services Tax, which was raised from 5 percent to 7 percent in July 2007.

A withholding tax of 3 percent of commissions earned will also be levied upon junket promoters

Overview of bidding process

In December 2004, the Singaporean Ministry of Trade & Industry issued the “Key Conditions & Requirements For The Request For Concepts,” which generated 19 responses.

Marina Bay

In November 2005, a formal Request For Proposals (RFP) for the Marina Bay site was issued by the Singapore Tourism Board to 12 short-listed respondents, with a deadline of March 29, 2006, stipulated for the submission of such proposals, and an expectation that the Marina Bay decision would be announced by mid-2006. The approximate weightings assigned by the tourism board to four evaluation criteria for the Marina Bay IR were identified as:

Tourism appeal and contribution:	40 percent
Architectural concept and design:	30 percent
Development investment:	20 percent
Strength of the consortium and partners:	10 percent

The Marina Bay site area covers approximately 51 acres and the resort will have a gross floor area no greater than 6.1 million square feet, and no less than 2.9 million square feet, with a maximum gaming area not to exceed 161,460 square feet and no more than 2,500 gaming machines.

On May 26, 2006, it was announced that Las Vegas Sands had won the bidding for the Marina Bay development. The complex, to be called The Marina Bay Sands, is expected to be completed in 2009, and to generate an additional S\$2.7 billion (US\$1.8 billion), or 0.8 percent, to Singapore’s annual GDP and create 30,000 jobs throughout the economy by 2015. Las Vegas Sands has committed to invest S\$3.9 billion (US\$2.7 billion) in the project, not including the fixed S\$1.2 billion (US\$800 million) cost of the site itself, which by most estimates will make it among the most expensive casino investments in the world. In addition to the casino, other key components of the plan are three hotel towers with 2,500 rooms, a museum and a convention center capable of accommodating over 52,000 people.

Sentosa

An RFP for the Sentosa integrated resort was issued on April 28, 2006, and closed on October 10, 2006. The approximate weightings assigned by the tourism board to four evaluation criteria were identified as:

Tourism appeal and contribution:	45 percent
Architectural concept and design:	25 percent

Development investment:	20 percent
Strength of the consortium and partners:	10 percent

The site area is approximately 121 hectares (299 acres) with a maximum gross floor area of 3.7 million square feet. As with Marina Bay, the maximum gaming area allowed is 161,460 square feet and the maximum number of gaming machines allowed is 2,500.

On December 8, 2006, it was announced that Genting International had won the bidding for the Sentosa Island development. Together with the land price and other associated capital costs, the total investment by Genting will total S\$5.2 billion (US\$3.5 billion). The casino element of the development is to be accompanied by six hotels offering 1,830 rooms, and convention facilities for approximately 12,000 people. Sentosa will also host Universal Studios' largest theme park in Asia, with 22 attractions within seven themed worlds.

Conclusion: Singapore case study

The decision to allow casinos in Singapore was not made lightly and remains a controversial issue, and significant divisions still exist in public opinion. Just one week before the decision was made public, the Ministry for Community Development, Youth and Sports released findings stating that 58 percent of all Singaporean adults gambled, and that 2.1 percent were at risk of addiction. The findings arose from a survey conducted by the Ministry from December 2004 to February 2005.

The government's decision, founded on the need to bolster flagging tourism revenues, therefore reflected an approach adopted by many of the jurisdictions where casino gaming is legal. The core elements of this approach are essentially that:

- Limited casino gambling should be allowed, at least initially
- A small number of large casinos is preferable to a large number of small properties
- Casinos should visually enhance a locality, ideally constituting just one component of an integrated entertainment and leisure development
- Effective consumer protection policies and social safeguards should be in place.
- Regulatory and taxation frameworks need to be clear, fixed and reflect the realities of global capital markets
- Regulation and oversight regimes must ensure that casinos are free from crime and vice, and that they are owned and operated only by fit and proper persons

In his speech of April 18, 2005, Prime Minister Lee noted the concerns of opponents, but concluded his remarks with the following comment: "If we reject these Integrated Resort projects, the world's investors and players will mentally scratch us off from the list of countries that will go for business, for leisure and entertainment."

Case study: Kansas

Kansas has had an interest in legalizing casino gaming, though lacking in consistency, for the last 15 years. Most recently, that interest has created the Kansas Expanded Lottery Act, which has provided for destination casinos in four locations. This act also has provided for a general outline and requirements regarding applicants and time frames for submission of documents.

The Kansas Lottery Commission was given the task of setting forth in regulation form, the specific time frames and rules that applicants must meet. At this time Kansas is still in the midst of a variety of issues relating to their Expanded Lottery Act, including the state constitutionality of the law itself and the selection of the best applicants, but their experience so far is worth examining.

As is often the case with legislation related to gaming, the law was passed amid some controversy. As a result, the legislation includes provisions that could prove difficult to implement. For example, the law requires persons that are 0.5 percent owners of applicant companies to qualify, rather than the more typical and practical 5 percent. Since 0.5 percent owners of a company can change, especially in a publicly traded company, on an almost daily basis, this will make it difficult to create a package of completed investigations in a timely manner. Thus, this alone could serve to emphasize the importance that legislation be based on a practical and logical foundation. It is all the more important to solidly establish this base on specific matters and maintain it, regardless of any controversy that is engendered during the final debates.

The legislation requires that the Lottery Commission adopt and publish rules not more than 30 days after the effective date of the act. This again was a difficult practical hurdle for that agency to meet. Such timelines can also serve to create confusion and create rules that are not as practical as they would otherwise be. Spectrum recommends, in fact, that an emphasis be put on the early part of rule-making and development of policy, to the extent possible, since the consequences of those actions can be felt for years.

The Kansas Expanded Lottery Act gave responsibility to the Lottery Commission to approve a management contract with a licensee (called a lottery gaming facility manager in the law), by taking into consideration the following factors:

- The size of the location
- The geographic area in which the facility is to be located
- The proposed facility's location as a tourist and entertainment destination
- The estimated number of tourists that would be attracted by the proposed facility
- The number and type of lottery facility games to be operated at the proposed facility
- Agreements related to the ancillary lottery gaming facility operations

The law required that applicants needed to meet certain minimum criteria. Part of the process in Kansas was to give preference to Kansas-based Indian tribes. Beyond that criterion, the law required that a prospective applicant:

- Should have sufficient access to financial resources to support the activities required
- Is current in filing all applicable statewide tax returns
- Has three consecutive years' experience in the management of gaming which would be Class III gaming

Beyond those minimum criteria, the law required that there be an investment of at least \$225 million to \$50 million by the applicant, depending on the Kansas gaming zone. The law provides for a 90-day period for the negotiation period. This time frame also proved less than sufficient according to Lottery officials.

Once approved, the law specified that the contract would have an initial term of 15 years and include provisions for the applicant to pay for oversight and regulation, among other things. A privilege fee is also required if selected as the lottery facility manager. This fee is \$25 million for a lottery facility manager in the northeast, southeast or south central Kansas gaming zone. The fee is \$5.5 million for a lottery facility manager in the southwest Kansas gaming zone.

The act also creates a board (the Review Board) with a purpose of determining which contracts best maximizes revenue, encourages tourism and otherwise serves the interests of the people of Kansas. The law requires that the board hold public hearings, take testimony, solicit the advice of experts and investigate the merits of each contract submitted by the executive director. The law requires that the board, within 60 days of submittal of all contracts, select by vote the contract which is the best possible such contract or, if just one contract is submitted, determine if that contract is the best contract. If agreement cannot be reached, the board can request that the contract be renegotiated.

After a determination by the Review Board that a contract is the best possible contract, the agency which is assigned to investigate the applicant, the Kansas Racing and Gaming Commission, is required to investigate the applicant and all officers and directors, as required. The Kansas Racing and Gaming Commission has 10 days after receiving the board's recommendation to vote to approve or reject in whole the background of the facility manager. It is apparent that this time frame, of 10 days, to make a determination on backgrounds of what can be a very complex application, presents practical issues. Though the Racing and Gaming Commission may start the process before the decision is made on the contract and may ask for additional time, this is another example of the need for a state to invest heavily in the beginning portion of a process.

Conclusions: Kansas Case study

The Kansas Expanded Lottery Act, while setting forth criteria and time frames for the selection of facility managers (destination casinos), may prove most useful in illustrating a law that is difficult and impractical to implement. In order to implement the law the Kansas Lottery and Racing and Gaming officials have now contracted with consulting companies that are more familiar with the gaming industry so as to make informed decisions in critical areas. It may have been worthwhile for such actions to take place at the earliest possible time. It appears that a

number of small changes to the law could have saved time and money in the creation of an industry that will affect much of the state's population for many years.

The time frames and criteria for applicants should allow enough time for promulgation of regulations in the most efficient and thorough way possible. For example, the requirement for the filing of applications has been done by many gaming agencies in the past several decades and there are precedents that abound. A law that enacts gaming should allow for the agencies with those responsibilities to avail themselves of those precedents and use the time-frames that are practical and applicable.

Of considerable significance, the law should allow adequate time for the significant owners of the company to be investigated. If an unrealistic benchmark requiring qualification of all those who own 0.5 percent of a company is placed in the law, it could force the investigatory body to make unnecessary judgments as to what investigations to complete and prioritize. If an unrealistic timeframe to complete background investigations is imposed, it would diminish the serious treatment with which such an important function can be brought to completion. Such an investigation will take very serious resources, resources which a state is not familiar in dedicating. If mistakes are made and an applicant is accepted and then found to have background issues which are unacceptable, as has happened in other states and internationally, the consequences can be close to disastrous in terms of time and money for a jurisdiction.

None of these decisions or the others in the bid process should be casually addressed in enabling legislation. In each case in the Kansas Expanded Lottery Act, it appears a shorter time frame was allowed than has proven practical.

Kansas chose to allow simultaneous bids for contracts throughout its four designated zones. This has the advantage of reducing the amount of time in starting the industry but has an important disadvantage. Specifically, an applicant that loses a bid in one part of the state does not have the opportunity to rebid in another, nor the knowledge of how their bid will do in another area. In effect, this serves to diminish the attention that applicants can give to the bidding process and ultimately may deprive the state of the ability to take advantage of the best pool of applicants.

One possible scenario is that one of the three sites – potentially a site in the more densely populated Boston area – could prove more attractive to a variety of worthy bidders all competing for the same license, thus precluding those same bidders from vying for one of the other licenses. As we have noted, simultaneous bids could deny Massachusetts an opportunity to get optimal development on all three of its licenses. Thus, we suggest staggered bids, but recommend consideration of temporary facilities to allow revenues to be generated at an earlier date.

State-by-state analysis of gaming regulation

The following tables provide an overview of the regulatory system in place in seven states with large commercial casino industries (that is, casinos that are not racetracks or Indian operations):

Gaming Agency Operational Analysis

State	Gaming Agencies (Primary Agencies Only)	Use of Police	Employee License Structure	Vendor License Structure	Inspectors Presence	Decision Making and Investigatory Structure
Colorado	Colorado Division of Gaming/ Colorado Gaming Commission/ Bureau of Investigation	Colorado Bureau of Investigation are State Police	License Required for Key and Support (Gaming) Employees	Slot Machine Manufacturers and Distributors only	Field Operations Staff not 24/7	Independent Commission is Part Time, Division makes Decisions on Employees
Illinois	Illinois Gaming Board	State Police are assigned to Gaming Board	License Required for All Employees	Gaming Related Companies only	No	Yes, Board is Part time
Iowa	Iowa Racing and Gaming Commission and State Division of Criminal Investigation	Division of Criminal Investigation work with Racing and Gaming Commission	License Required for All Employees	Gaming Related Companies must be investigated, Regular and Continuing Company Contracts examined only	Regulatory Officials at Casinos Business Days	Investigatory Agency is Independent Recommendations not made to Commission
Louisiana	Louisiana Gaming Control Board and State Police	State Police is the Primary Regulatory Agency	Key Employees Licensed, Work Permit for Gaming Employees	Gaming Related Companies only	No	Yes, Board is Part-time except for Chair
Mississippi	Mississippi Gaming Commission	Some Agency Employees are Law Enforcement Officers	Key Employees Licensed, Work Permit Required for Gaming Employees	Gaming Related Companies Licensed only	No	No
Nevada	Nevada Gaming Control Board and Gaming Commission	Some Agency Employees are Sworn Officers Local Police Assist in some Process	Key Employees Licensed, Gaming Employees Registered	Gaming Equipment Distributors only, no Renewal	No	Yes, Commission is unstaffed and Part time
New Jersey	New Jersey Casino Control Commission and Division of Gaming Enforcement	State Police Assigned to Division of Gaming Enforcement	Key Employees, Casino Employees Licensed, Employees with Access to Casino are Registered	Gaming Companies and Regular and Continuing Non-Gaming Related Companies Licensed	Yes, 24/7 at all casinos	Investigatory Agency is Independent, Decision Making Agency is Full time and Staff

Nevada model

Nevada's Gaming Control Board was created in 1955, with the stated purpose to "eliminate the undesirable element in Nevada gaming and to provide regulations for the licensing and operation of gaming."²⁵¹ In 1959 the Nevada Tax Commission was relieved of its regulatory duties over the gaming industry and the Nevada Gaming Commission was created with licensing authority. In 1971 legislation expanded the duties of the State Gaming Commission to include tax collection. As the first modern gaming agency it has grown over the years.

Largely because of the toughened regulatory system respected companies were attracted to the industry and today the gaming industry in Nevada has become a multibillion dollar business. The Board is comprised of three members appointed for four year terms, and has approximately 450 employees in seven divisions.

New Jersey model

New Jersey took a different approach than Nevada when it implemented gaming in 1978. New Jersey had a prior history of problems with organized crime and thus the desire to keep the industry crime free was uppermost in the minds of those who drafted the New Jersey Casino Control Act. In addition, New Jersey clearly did not want to create a system where regulators were a captive of the industry, as they perceived existed in Nevada.

The result in New Jersey has been a stricter regulatory environment. Rules include a system of internal controls which help account for the movement of cash in the casino and divide functions between departments so as to eliminate incompatible functions. Licensing requirements were implemented for both employees and casino service companies.

New Jersey has gone through several periods of deregulation but a strict system still exists in areas deemed critical. Through their approach this state has largely accomplished its original goal, of establishing a crime free industry. The cost of regulation has been relatively high, as there are approximately 700 employees in the regulatory agencies now and a budget of about \$72 million. As a percentage of revenue, however, the cost is relatively small.

Variations in gaming agencies

Gaming agencies vary, because of the differences in jurisdictions that they represent and also because of different approaches to regulating the gaming industry. The extent of attention that is given regulation, while different in budget amounts is not as different relative to gross revenue. More important than expense is whether those agencies are designed with the attention to the accomplishment of their charge. The public confidence and trust in the industry is a precious commodity that cannot be overestimated, for it allows for the existence of gaming industry itself. Moreover, it is not necessary today, with advancements in technology and well established networks of law enforcement and intelligence, to overlook areas of regulatory control that could allow for organized crime or theft of assets.

²⁵¹ Nevada Gaming Commission. http://gaming.nv.gov/documents/pdf/gaming_regulation_nevada.pdf

The budget for a gaming agency should be paid for not out of the general fund, nor out of taxes on gaming gross revenue, but out of fees and billings charged by the gaming agencies directly to the gaming industry. The extent of the budget should be sufficient to assure the gaining of the public confidence in the integrity of the industry and should include those areas that allow for the needed licensing, internal controls, and regulatory oversight.

Recommendations for Massachusetts gaming regulation

As can be seen from the case studies and the above tables, gaming agencies vary in the following ways: with regard to license structure; presence of inspectors or other regulatory oversight; and decision making and investigatory structure. Our recommendations are that Massachusetts adopts an efficient but relatively strict approach to the regulation of their gaming industry at least at the start because of the extreme value that such regulations hold relative to the public trust and confidence.

- Create regulations for the control of the assets that thoroughly address the rules for table games and controls for slot machines, including the most recent technological changes in the industry
- Provide for sufficient regulatory oversight by creating a unit or team that is frequently on the casino floor, accessible to the public and visible to casino employees
- Create a license structure that addresses all those that participate in the gaming industry, including the casino licensees, the companies that service those licensees and the employees. It is only by examining the background of all those who seek to participate in the industry that integrity can be assured. Because Massachusetts is considering this legislation after other licensing systems have already been implemented in many states, it can develop a system with optimal efficiency.
- Create a decision-making structure that allows for independence from the investigatory branch of the regulatory structure. In addition, sufficiently staff the decision-making agency to ensure it has adequate resources to carry out its duties.

Regulatory budget

This section provides budget guidance for effective gaming regulation. The following tables show, in general terms, what it would cost to fund the regulatory agencies that would oversee three casino properties. We project that the total annual budget required to regulate three destination casinos would be \$16.1 million, with gaming operators providing most of the funds. There would potentially be some additional fees charged to individual licensees or suppliers.

The budgets are summarized as:

Massachusetts Gaming Control Authority

	Salaries	\$	7,188,642
	Operational Expenditures	\$	1,509,080
	GCA Total	\$	8,697,722
Massachusetts Division of Gaming Investigation and Enforcement			
	Salaries	\$	6,401,376
	Operational Expenditures	\$	974,900
	DGIE Total	\$	7,376,276
Total		\$	16,073,998

The following tables detail an annual budget for the Gaming Control Authority:

Est. budget, Massachusetts Gaming Control Authority

Title	No. of positions	Gross Pay	Health Benefits Contribution, 12.50%	Retirement Benefits, Contribution, 22.80%	Other benefits, contribution, 8.10%	Projected Annual Expenditure
Board chairman*	1	\$ -	\$ -	\$ -	\$ -	\$ -
Appointed board members*	4	\$ -	\$ -	\$ -	\$ -	\$ -
Auditor and treasurer board-members*	2	\$ -	\$ -	\$ -	\$ -	\$ -
Receptionist	3	\$ 75,000	\$ 9,375	\$ 17,100	\$ 6,075	\$ 107,550
Executive director	1	\$ 150,000	\$ 18,750	\$ 34,200	\$ 12,150	\$ 215,100
Executive secretary	1	\$ 30,000	\$ 3,750	\$ 6,840	\$ 2,430	\$ 43,020
Administrative assistant	1	\$ 35,000	\$ 4,375	\$ 7,980	\$ 2,835	\$ 50,190
Chief inspector	1	\$ 75,000	\$ 9,375	\$ 17,100	\$ 6,075	\$ 107,550
Senior inspector	12	\$ 720,000	\$ 90,000	\$ 164,160	\$ 58,320	\$ 1,032,480
Inspector (16 per location)	48	\$ 1,920,000	\$ 240,000	\$ 437,760	\$ 155,520	\$ 2,753,280
Clerical support - inspectors department	3	\$ 84,000	\$ 10,500	\$ 19,152	\$ 6,804	\$ 120,456
Licensing manager	1	\$ 75,000	\$ 9,375	\$ 17,100	\$ 6,075	\$ 107,550
Senior licensing specialist	1	\$ 60,000	\$ 7,500	\$ 13,680	\$ 4,860	\$ 86,040
Licensing specialist	3	\$ 120,000	\$ 15,000	\$ 27,360	\$ 9,720	\$ 172,080
Chief revenue auditor	1	\$ 75,000	\$ 9,375	\$ 17,100	\$ 6,075	\$ 107,550
Supervising revenue auditor	4	\$ 240,000	\$ 30,000	\$ 54,720	\$ 19,440	\$ 344,160
Revenue auditor	12	\$ 480,000	\$ 60,000	\$ 109,440	\$ 38,880	\$ 688,320
Clerical support - revenue audit department	3	\$ 84,000	\$ 10,500	\$ 19,152	\$ 6,804	\$ 120,456

Est. budget, Massachusetts Gaming Control Authority

Title	No. of positions	Gross Pay	Health Benefits Contribution, 12.50%	Retirement Benefits, Contribution, 22.80%	Other benefits, contribution, 8.10%	Projected Annual Expenditure
Legal counsel	4	\$ 600,000	\$ 75,000	\$ 136,800	\$ 48,600	\$ 860,400
Para-legal	2	\$ 120,000	\$ 15,000	\$ 27,360	\$ 9,720	\$ 172,080
Clerical support	2	\$ 70,000	\$ 8,750	\$ 15,960	\$ 5,670	\$ 100,380

* Board members are not paid a salary, but they may be reimbursed for round-trip travel to meetings. They are assumed to meet two days per month.

** Reserved for other legal, accounting and consulting services (i.e., GLI certification of gaming devices, gaming consultants, expert witness, etc.)

Note 1: The budget is prepared with the assumption that there will be three large destination properties and gross gaming revenue will be approximately \$1.5 billion when all casinos are operational.

Note 2: We anticipate a minimum of three deputies attorney general and two legal support staff to be assigned to assist the gambling commission. The Attorney General's Office will be reimbursed for these and other ancillary costs .

Note 3: We anticipate a minimum of 16 inspectors assigned to each location (48 total) and a total of four senior inspectors at each property (12 total) to cover the 24/7 operation.

Note 4: We anticipate a minimum of four auditors per each location (12 total) to conduct daily revenue audits books and records and four senior auditors to review audit work paper and report.

Note 5: Other benefits represent overtime, comp time and administrative leaves.

	Projected Annual Expense
Six automobiles	\$ 150,000
Gasoline (15,000 avg. Annual miles, approx. 1,000 gal @\$4.5)	\$ 27,000
Supplies and materials	\$ 50,000
Telephone, land lines	\$ 126,000
Cell phones	\$ 23,400
Utilities	\$ 30,000
Cleaning	\$ 12,000
Postage, overnight service	\$ 18,000
Office equipment (\$35,000 per dept.)	\$ 140,000
Information system maintenance	\$ 50,000
Printing	\$ 5,000
Transportation/travel (air/lodging/per diem) - in state	\$ 15,000
Transportation/travel - (air/lodging/per diem) out of state	\$ 50,000
Conferences	\$ 50,000
Training	\$ 150,000
Mileage reimbursement	\$ 10,000
Dues & subscriptions	\$ 2,500
Computer & other electronic equipment (\$10,000 per dept.)	\$ 30,000
Monthly equipment maintenance fees - (\$2000 mo.)	\$ 24,000
Monthly remote network support (\$500 mo.)	\$ 6,000
Uniform allowance (\$400 per sworn officer per annum x15)	\$ 6,000
Sub-total, Operational Expenditures	\$ 974,900

The following tables detail an annual budget for the Division of Gaming Investigation and Enforcement:

Est. budget, Massachusetts Division of Gaming Investigation and Enforcement						
Title	No. of positions	Gross Pay	Health Benefits Contribution, 12.50%	Retirement Benefits, Contribution, 22.80%	Other benefits, contribution, 8.10%	Projected Annual Expenditure
Director	1	\$ 150,000	\$ 18,750	\$ 34,200	\$ 12,150	\$ 215,100
Administrative assistant	1	\$ 35,000	\$ 4,375	\$ 7,980	\$ 2,835	\$ 50,190
Chief compliance auditor	1	\$ 75,000	\$ 9,375	\$ 17,100	\$ 6,075	\$ 107,550
Supervising compliance auditor	4	\$ 240,000	\$ 30,000	\$ 54,720	\$ 19,440	\$ 344,160
Compliance auditor	12	\$ 480,000	\$ 60,000	\$ 109,440	\$ 38,880	\$ 688,320
Clerical support - compliance audit department	3	\$ 84,000	\$ 10,500	\$ 19,152	\$ 6,804	\$ 120,456
Chief of enforcement (state police)	1	\$ 85,000	\$ 10,625	\$ 19,380	\$ 6,885	\$ 121,890
Enforcement supervisor (state police)	3	\$ 195,000	\$ 24,375	\$ 44,460	\$ 15,795	\$ 279,630
Enforcement officer (state trooper)	12	\$ 660,000	\$ 82,500	\$ 150,480	\$ 53,460	\$ 946,440
Clerical support (state police)	4	\$ 120,000	\$ 15,000	\$ 27,360	\$ 9,720	\$ 172,080
Chief licensing investigator	1	\$ 75,000	\$ 9,375	\$ 17,100	\$ 6,075	\$ 107,550
Senior licensing investigator	5	\$ 300,000	\$ 37,500	\$ 68,400	\$ 24,300	\$ 430,200
Licensing investigator	18	\$ 720,000	\$ 90,000	\$ 164,160	\$ 58,320	\$ 1,032,480
Clerical support - licensing department	5	\$ 140,000	\$ 17,500	\$ 31,920	\$ 11,340	\$ 200,760
Chief information technology officer	1	\$ 75,000	\$ 9,375	\$ 17,100	\$ 6,075	\$ 107,550
Information technology specialist	4	\$ 240,000	\$ 30,000	\$ 54,720	\$ 19,440	\$ 344,160
Legal counsel (attorney general's office)	4	\$ 600,000	\$ 75,000	\$ 136,800	\$ 48,600	\$ 860,400

Est. budget, Massachusetts Division of Gaming Investigation and Enforcement

Title	No. of positions	Gross Pay	Health Benefits Contribution, 12.50%	Retirement Benefits, Contribution, 22.80%	Other benefits, contribution, 8.10%	Projected Annual Expenditure
Para-legal (attorney general's office)	2	\$ 120,000	\$ 15,000	\$ 27,360	\$ 9,720	\$ 172,080
Clerical support (attorney general's office)	2	\$ 70,000	\$ 8,750	\$ 15,960	\$ 5,670	\$ 100,380
Sub-Total - Salaries and Benefits	84	\$ 4,464,000	\$ 558,000	\$ 1,017,792	\$ 361,584	\$ 6,401,376

Note 1: The budget is prepared with the assumption that there will be three large destination properties and gross gaming revenue will be approximately \$1.5 billion when all casinos are operational.

Note 2: We anticipate a minimum of four deputies attorney general, two paralegal and two support staff to be assigned to the Division of Gaming Investigation and Enforcement.

Note 3: Other benefits represent overtime, comp time and administrative leaves.

	Projected Annual Expense
Six automobiles	\$ 150,000
Gasoline (15,000 avg. Annual miles, approx. 1,000 gal @\$4.5)	\$ 27,000
Supplies and materials	\$ 50,000
Telephone, land lines	\$ 126,000
Cell phones	\$ 23,400
Utilities	\$ 30,000
Cleaning	\$ 12,000
Postage, overnight service	\$ 18,000
Office equipment (\$35,000 per dept.)	\$ 140,000
Information system maintenance	\$ 50,000
Printing	\$ 5,000
Transportation/travel (air/lodging/per diem) - in state	\$ 15,000
Transportation/travel - (air/lodging/per diem) out of state	\$ 50,000
Conferences	\$ 50,000
Training	\$ 150,000
Mileage reimbursement	\$ 10,000
Dues & subscriptions	\$ 2,500
Computer & other electronic equipment (\$10,000 per dept.)	\$ 30,000
Monthly equipment maintenance fees - (\$2000 mo.)	\$ 24,000
Monthly remote network support (\$500 mo.)	\$ 6,000
Uniform allowance (\$400 per sworn officer per annum x15)	\$ 6,000
Sub-total, Operational Expenditures	\$ 974,900

A number of factors could impact the agencies' budgets, including the timing of legalization, and whether non-gaming suppliers would be licensed, and the threshold to trigger such licensure requirements.

Spectrum notes that the proposed annual regulatory budgets for both agencies would equate to about 1 percent of projected annual gaming revenue. We cross-checked the validity of our budget by comparing regulatory budgets to gaming revenue in existing gaming markets, using 2006 for comparison:

Gaming Agency Budgets Compared to Revenue

State	Gross Casino Revenue	Number and Type of Casinos	Budget for Gaming Agencies	Agency Budget as a Percent of Gaming Revenue	Gaming Agency Employees (Primary Agencies)
Colorado	\$782 Million	46 Land-based Limited	\$8.7 Million	1.11%	97
Illinois	\$1.9 Billion	9 Riverboats	\$15.2 Million	.80%	142
Iowa	\$1.2 Billion	10 Riverboat 3Land-Based 3 Racetracks	\$10.6 Million	.90%	144
Louisiana	\$2.6 Billion	12 Riverboats 1 Land-Based 3 Racetracks	\$25 Million	.97%	245
Mississippi	\$2.3 Billion	27 Dockside Land-Based	\$10 Million	.48%	135
Nevada	\$12.6 Billion	274 Land-Based	\$46 Million	.37%	460
New Jersey	\$5.2 Billion	12 Land-Based	\$72 Million	1.38%	704

Source: State Gaming Agencies, Calendar 2006 and Fiscal 2006 Data

This table suggests that our proposed Massachusetts regulatory budget is realistic and in line with other gaming states.

Regulatory, construction timeline

This section of the report provides general guidance as to expectations with respect to the potential timing of destination casinos. A number of factors could impact this timeline in material ways, including whether or not the bidding process would be staggered and concurrent. We also note the possibility of temporary facilities in this timeline.

This timeline also does not account for all regulatory functions. For example, the drafting of regulations would likely take place after the licensees have been selected, and while the temporary facility is being developed and the vendor and employee licensing process is underway.

The construction timeframe was developed by our strategic partner, SOSH Architects, based in Atlantic City and New York. SOSH, which has extensive experience in designing casino destinations of the caliber envisioned in the Massachusetts legislation, assumed fast-track construction of facilities similar to Borgata in Atlantic City.

- **Gaming bill enacted:** Prior to this phase, legislation will be proposed, debated and marked up for passage in the legislature. For purposes of this timetable, we are assuming that the legislation would be enacted on or about September 1, 2008. If the

enactment of the legislation is delayed, the rest of the timetable set forth would likely have to be adjusted as well.

- **Gaming Control Authority selected, confirmed:** We assume it will take this amount of time to identify, recruit and conduct background investigations for the members of the Gaming Authority.
- **Initial hiring of staff:** We believe that, initially, the two agencies should each hire a small start-up staff. Significant hiring will take place over the course of the entire timeline to reflect the regulatory needs as they develop. Initial hiring might include administrative staff, a General Counsel, Director of Licensing and other critical staff.
- **Develop RFP for gaming license awards:** During this phase, the RFPs for casino licenses will be prepared, reviewed and eventually adopted by the Gaming Authority. This would involve reviewing successful RFPs used in other jurisdictions, as well as specifying the public-policy requirements established in Massachusetts.
- **Issue RFP:** The RFP will be issued and all potential responders will be identified and logged into the system.
- **Response time for RFP:** Responders will need time to prepare their responses to the RFP, prepare preliminary renderings and prepare for presentations before the Authority. Some of the responders will form joint ventures and they will need some time to come to terms. The terms of the RFP are likely to be highly specific. Moreover, as judged by experience in other markets, the responses would likely comprise multiple binders of information including Business Entity Disclosure Forms and Personal History Disclosure Forms for the entities and qualifiers.
- **Investigate and evaluate RFP candidates:** Several actions should occur during this phase. The suitability investigations should take place while the other aspects of the RFP are being evaluated. A full-time investigative staff need not be in place at this point, as such functions could be outsourced. However, it should be made clear that any company failing to meet integrity standards will not be considered, regardless of how impressive the rest of their proposal may be.
- **Final selection of licensees, locations:** The Authority would need time to discuss and deliberate on the selection(s) to be made. Public hearings may take place and there would need to be comprehensive decisions written.
- **Create, open employee and vendor licensing process:** Once the casino licensees are identified, the employee and vendor licensing systems can be designed and implemented. The opening of the employee licensing and vendor licensing processes should take place approximately one year prior to the opening of the first facility. It would take approximately 12 to 18 months for the selected licensees to construct temporary facilities.
- **Development of temporary facility:** The opening of the temporary facility will, assuming everything else fits into place, take place approximately two years after the legislation has been enacted and about one year after the license selections have been made.

- **Full regulatory staffing process:** The Authority should be fully staffed approximately one month before the first opening. As casinos are added, the Authority will need to add additional inspectors, auditors and the like. Increased staffing for the Authority should start approximately one year before the first casino opening and staff should be hired on an as-needed basis during the year.

The chart on the following page details the general assumptions regarding a potential timeline. Note that, with a rigorous licensing process and a commitment to build destination resorts, the timeline extends beyond five years. That length of time is why we suggest the Commonwealth should consider temporary facilities as an interim step to create employment and generate tax revenue.

MASSACHUSETTS CASINO GAMING REGULATORY & DEVELOPMENT SCHEDULE

	DURATION	START	FINISH	2008	2009	2010	2011	2012	2013	2014
REGULATORY CREATION										
Gaming Bill Enacted	Milestone	09-01-08	09-01-08	■						
Gaming Authority Selected, Confirmed	90 days	07-28-08	11-30-08	■						
Initial Hiring of Staff	60 days	11-07-08	01-29-09		■					
Develop RFP for Gaming License Awards	100 days	10-22-08	03-10-09		■					
Issue RFP	Milestone	03-10-09	03-10-09		■					
Response time for RFP	120 days	03-10-09	08-24-09		■					
Investigate, evaluate RFP candidates	180 days	03-10-09	11-16-09		■					
Final selection of licensees, locations	30 days	10-16-09	11-26-09			■				
Create, open employee, vendor licensing process	250 days	12-01-09	11-15-10			■				
Development of temporary facility	220 days	12-21-09	10-22-10			■				
Full regulatory staffing process	250 days	12-01-09	11-15-10			■				
CASINO LICENSEE DEVELOPMENT PROGRAM										
Market Analysis	90 days	09-01-08	01-02-09	■						
Site Analysis	100 days	09-01-08	01-16-09	■						
Project Program	60 days	11-04-08	01-26-09	■						
Pre-Design	60 days	12-08-08	02-27-09		■					
Conceptual Design	100 days	03-09-09	07-24-09		■					
Casino License Awarded	Milestone	11-26-09	11-26-09			■				
Temporary Facility Design and Contract Documents	100 days	11-26-09	04-14-10			■				
Temporary Facility Preconstruction Footing and Foundation	60 days	03-01-10	05-21-10			■				
Temporary Facility Construction	120 days	05-18-10	11-01-10			■				
Temporary Facility Open and Operating	Milestone	11-01-10	11-01-10				■			
Schematic Design	121 days	11-26-09	05-13-10			■				
Design Development	132 days	05-13-10	11-12-10			■				
Construction Documents	220 days	10-12-10	08-12-11				■			
Site Prep	112 days	06-21-10	11-23-10				■			
Preconstruction/Footing & Foundation & Order Long Lead Items	160 days	11-23-10	07-01-11				■			
Bidding and Award	65 days	05-12-11	08-10-11				■			
General Construction	620 days	06-01-11	10-15-13				■			
Staff Orientation and Building Commissioning	64 days	10-01-13	12-27-13						■	
PROJECT OPENING	Milestone	01-01-14	01-01-14							■

Potential impact of Indian casino pursuant to IGRA on commercial casinos in Massachusetts

A potential Indian casino in Massachusetts is both a regulatory and economic issue. First, and foremost, however, it is a regulatory issue – starting at the federal level. Thus we are treating the issue of Indian gaming in the Gaming Regulation section of this report.

Tribal casino gambling has taken shape in the United States as the product of several fairly recent legal decisions and acts.²⁵² In 1987, the U.S. Supreme Court's decision in *California v. Cabazon Band of Mission Indians* was a critical step in the development of tribal gambling and regulation. At stake in this case was whether tribal gaming fell under the state's regulatory powers. The court held that states lacked authority to regulate tribal gambling.²⁵³ But with the passage of the 1988 Indian Gaming Regulatory Act (IGRA), Congress delegated power to the states to regulate Indian gaming. Furthermore, the IGRA laid out conditions under which tribal gaming could be offered. In practice, the legislation has meant that federally recognized Indian tribes can offer a particular form of gambling on their reservation, so long as that type of gambling is not banned under state law. However, because the IGRA delegated regulatory powers to the states, tribes wishing to offer gambling must negotiate the terms under which gambling will be offered in a tribal-state compact. The IGRA outlines the general terms of such agreements, and the states are expected to negotiate with the tribes in good faith in developing compacts.

The Mashpee Wampanoag Tribe is seeking to build a casino in Middleborough, MA. The tribe took a big step forward in that effort after the US Interior Department acknowledged the existence of the Cape Cod-based Mashpee Wampanoag Tribe on February 15, 2007.²⁵⁴ The decision in and of itself permitted the tribe to request that the federal government hold lands for it in trust, a process that a newly recognized tribe follows to establish a reservation.

Federal law generally bars a tribe from putting lands in trust for a casino after October 17, 1988.²⁵⁵ There are exceptions. The Mashpee Wampanoag tribe, for example, is newly recognized, so that restriction does not apply. The Wampanoag Tribe of Gay Head (Aquinnah) near New Bedford, however, was recognized prior to 1988, so we will not address it in this analysis.

The Commonwealth could decide to persuade the Mashpee Wampanoag tribe to seek one of the commercial casino licenses that might be proposed, or to enter into a partnership for one of those licenses, rather than building a tribal casino. A tribal casino would fall under a different regulatory structure than commercial casinos in the state. In this section, we examine

²⁵² For a detailed discussion, see Steven Light and Kathryn Rand. 2005. *Indian Gaming & Tribal Sovereignty: The Casino Compromise*. Lawrence, KS: University Press of Kansas.

²⁵³ Light & Rand, p. 41.

²⁵⁴ US Department of Interior press release, February 15, 2007

²⁵⁵ IGRA, Section 2719, paragraph A

some of the issues related to the IGRA and tribal casinos which should be considered in developing commercial casino legislation in Massachusetts.

Effects of a tribal casino in Massachusetts

If Massachusetts legalizes commercial casinos, it could effectively open the door to Indian tribes to also offer Class III (Las Vegas-style) gambling. However, such casinos would require tribal-state compacts, over which the Commonwealth would have significant negotiating power. Tribes could offer Class II gaming (bingo, pull-tabs and, importantly, electronic versions of these games that closely resemble Las Vegas-style slot machines, but not bona fide slot machines or casino table games) under NIGC oversight, and subject to IGRA's requirement. However, a tribal-state compact is *not* required for a tribal casino to offer Class II gaming.²⁵⁶ Although a Class II tribal casino would represent competition to commercial casinos in the state, a Class III facility would pose a greater threat.

The distinction, however, between the two forms of gaming has become somewhat blurred as the result of a National Indian Gaming Commission decision released June 5, 2008. The commission announced that it was backing off plans to possibly impose a stricter interpretation of Class II gaming.²⁵⁷ The federal agency had proposed regulations that were an attempt to create "a bright line" between Class II and Class III gaming. The commission was concerned that technological advances had made the Class II bingo-type machines too similar to the Class III machines.

Indian tribes argued that the regulations would have forced many of their casinos to close and that the negative economic impact could have been as high as \$4 billion.

The decision to abandon the controversial regulations is a positive development for the Mashpee Wampanoag Tribe, which could, as we have already noted, build a casino with Class II machines without seeking state approval.

Meanwhile, based on information provided by Nancy Pascola at the U.S. Bureau of Indian Affairs, it could be a significant time before a tribal casino in Middleborough may be built.²⁵⁸ The Wampanoag tribe must first submit and have the BIA approve an Environmental Impact Statement, prior to the site being given tribal reservation status. The tribe is currently working on the Environmental Impact Statement, according to the BIA. (The fact that the potential casino site and tribal headquarters are at two different locations is irrelevant to the process of reservation approval because the tribe is seeking initial reservation approval. Other tribes in a similar situation have received approval from the BIA for multiple sites.)

²⁵⁶ Light and Rand (2005), p. 45.

²⁵⁷ National Indian Gaming Commission, June 5, 2008, press release, via <http://www.nigc.gov/ReadingRoom/PressReleases/PressReleasesMain/PR92062008/tabid/839/Default.aspx>

²⁵⁸ This is not a legal opinion, but a description of the process as it is understood, based on an interview.

In August 2007, the tribe filed a land-in-trust application. The Bureau of Indian Affairs held a public hearing in March 2008 to determine the level of detail required of the tribe's environmental impact statement.

A tribal Class III casino and perhaps even a Class II casino in Massachusetts could have a significantly negative effect on commercial casinos in the state, especially if a commercial casino is located near the tribal casino. This situation would have potentially disastrous effects on commercial casinos in the Commonwealth, as a tribal casino in this case would potentially contribute no tax money to the Commonwealth, and would obviously cause a decline in the gross gaming revenues to the commercial casinos. The result could be a significant negative impact on the Commonwealth's gaming tax receipts. The ideal situation, from the Commonwealth's perspective, would be to issue three commercial casino licenses, as discussed elsewhere in this report, and encourage tribal interests to pursue one or more of these licenses, either solely or as a partner with other interested licensees, rather than build a tribal casino.

Level playing field

When tribal casinos do not fall under the same regulatory and tax guidelines as commercial casinos, they often have a distinct competitive advantage. For example, if a tribal casino is built in Massachusetts, and it is able to avoid all state gaming taxes (e.g., 27 percent tax on gross gaming revenue), this alone would put the tribal casino at a significant advantage over commercial casinos in the Commonwealth. The tribal casino in this case would effectively operate at a significantly lower cost of operation. The more profitable tribal casino would then be better positioned to advertise, add amenities, and otherwise compete for the consumers' entertainment spending. The Commonwealth must be very careful to consider how tribal casinos can be in an advantageous position, and to help ensure that commercial operators can compete. There are other important considerations, as well. A tribal casino may offer smoking, while the commercial casinos in the state are to be non-smoking facilities. This could represent a significant advantage for the tribal casino over commercial casinos.

Of course, what actually happens with tribal gambling is going to be the result of tribal-state negotiations, legal actions and decisions, the details of which are not yet predictable. But given that the Commonwealth has negotiating powers in developing compacts with tribes, we can highlight some issues the Commonwealth may wish to consider in order to minimize any negative impact a tribal casino could have on commercial casinos in the Commonwealth. This is discussed later in this section.

Effect on commercial casinos

The process in developing tribal compacts is uncertain, as each case in each state is unique. Of course, all such compacts fall under the umbrella of the IGRA, but there is variation across compacts. However, if we consider the likely effects of a single tribal casino on the proposed commercial casinos in the Massachusetts, we must begin with some basic assumptions, most importantly with the details of the compact.

There are a number of factors that would affect the extent to which a tribal casino would compete with commercial casinos in Massachusetts. These factors include:

- The location of each casino, relative to:
 - The population of resident and tourist casino customers
 - Other tourism attractions
 - Major highways/interstates (traffic flows)
 - Major airports (ease for non-regional tourism/convention traffic)
 - Casino opportunities in neighboring states
- The unique nature of each casino
 - Do patrons see them as perfect substitutes, or does each offer a unique “theme” worth experiencing?
- Other amenities offered at or near the casino, which might attract customers/tourists
- Operation of each casino
 - A poorly managed casino would obviously be less competitive.
 - Higher slot pay-out percentages may make all the casinos in the state – as a group – more competitive than casinos in other states; lower pay-outs could have the opposite effect.
- Regulatory and tax differential
 - Commercial casinos face state regulation and taxation, which may put them at a disadvantage relative to tribal casinos.
 - Non-smoking commercial casinos will be at a significant disadvantage to a tribal casino that permits smoking, unless and until all casinos in the region are smoke-free.

Of course, there are a variety of other factors that could have a significant effect on the extent to which a tribal casino would act as a substitute to commercial casinos in the Commonwealth. Many of these issues have already been addressed in detail elsewhere in this report.

At this early stage in the study and debate phases of casino development in Massachusetts, it is difficult to assign values to each of the variables that might affect competition among the casinos. However, it is obvious that there are three general (theoretical) possibilities:

1. The tribal casino may act as a complement to commercial casinos.
2. The tribal casino may have a neutral effect on commercial casinos.
3. The tribal casino may have a negative “substitution” effect on commercial casinos.

The first two effects can be viewed as theoretical possibilities only. It is difficult to imagine that a tribal casino would be either neutral or beneficial to commercial casinos in reality. The third case, in which the tribal casino acts as a substitute to the commercial casino, is the case that would most concern policymakers, voters, and the commercial casino operators. This is the most likely case for the situation in Massachusetts.

First, let us assume that a state-tribal compact would require that the tribe pay the state and local governments some level of fees equivalent to any and all regulatory expenses, plus expenses to cover the heightened levels of public services that will be required because of the large number of visitors to the casino site, and surrounding area. Such expenses would include roads and highways, water and sewage, police and emergency response services, and others. With this assumption, we remove any costs to state taxpayers coming directly from the tribal casino's existence.

Second, let us suppose that the tribal casino has a neutral effect on the Massachusetts Lottery. The effects of casinos on the lottery were discussed in a previous section. For simplicity, we could assume that the tribal casino helps to market the lottery, so that there is no significant substitution away from the lottery due to the tribal casino. There is no reason to assume that the tribal casino would market the lottery, so there would likely be at least a short-run modest negative impact of a tribal casino on the state's lottery, as discussed earlier in this report. Whether or not a single casino (if a tribal casino alone was approved in Massachusetts) would really dent the state's lottery receipts is debatable. If three casinos are introduced, however, we suggest there is the potential for a negative short-term impact on the lottery.

Third, for simplicity, let us ignore any positive economic effects a tribal casino would have on its surrounding economy. What we have done up to this point is basically assume that the tribal casino would have no significant impact on surrounding businesses, the lottery, or taxpayers. The point in making these assumptions is to isolate the effects of a tribal casino on commercial casinos in the Commonwealth, and the State's tax receipts from casinos, if commercial casinos and a tribal casino co-exist in Massachusetts.²⁵⁹

Case 1: Tribal casino instead of a commercial casino in Region 2

If a tribal casino is built in Middleborough, and a commercial casino is not licensed and built in Region 2, then let us assume that the tribal casino would be a very similar facility, in terms of amenities, convenience of location, games offered, etc., so that it effectively has no impact on the commercial casinos in Regions 1 and 3, relative to the case in which the Region 2 casino is commercially owned. In this case, then, we would simply revise the empirical estimates presented earlier in this study. The estimated year gross gaming revenue (GGR) for the Region 1 casino would still be \$542 million in the "moderate" case. The gaming tax paid would be \$146.4 million. For the Region 3 casino unaffected by the tribal casino, its GGR would remain \$432.7 million in the moderate case, with an estimated gaming tax paid of \$116.8 million.

The major issue, in this case, of course, is that the Commonwealth would effectively lose the gaming tax from the Region 2 casino, an estimated \$142.2 million per year in the moderate case. In addition to this loss would be whatever state income taxes would have been paid by the casino.

²⁵⁹ If readers wish to evaluate the full effects of a tribal casino on the State economy and tax receipts, they can relax each of the assumptions made above, and incorporate information from the rest of this report, as well as details of a prospective tribal compact, to predict the likely overall effect of a tribal casino. With so many variables, however, resulting estimates are likely to be much less precise and accurate.

Case 2: Tribal casino is built subsequent to a Region 2 commercial casino

If the Commonwealth approves three commercial casinos before the tribal casino issue is resolved, then there is a possibility that a tribal casino could be approved and built after the commercial casinos have been built. It is quite difficult to imagine any situation in which the state would want to agree to such a tribal casino, when a tribal casino would clearly have a very serious “cannibalization” impact on a commercial Region 2 casino, assuming the tribal casino is built in Middleborough. But there are some scenarios in which the tribe could be allowed to build against objections of the state; this possibility would depend on legal actions and decisions.

In this case, the losses to the Commonwealth would be more difficult to estimate. The lost tax receipts would perhaps not be as large as the previous case, because the Region 2 casino would still pay some taxes, at least the \$100 million minimum tax. However, one would expect that a tribal casino may have a very serious impact on the GGR of a Region 2 casino. If we assume that the casino sees only half of its projected revenue after a tribal casino is built, the GGR would be only \$263.4 million. If the casino is required to pay a minimum of \$100 million in taxes, then if a tribal casino in Region 2 is seen by casino license applicants as a real possibility, there may be few such applicants. This is because such a commercial casino would be paying an effective tax on its GGR of 38 percent.²⁶⁰ If potential applications have the opportunity to apply instead for the Region 1 or 3 casino sites, those are much more attractive, as the effective tax rate on those locations will be appreciably lower.

In short, if the Commonwealth approves a Region 2 commercial casino and a tribal casino is then subsequently built, it will be disastrous for the Region 2 commercial casino, at least. The loss to the Commonwealth in this case could be as large as in the previous case if the commercial casino in Region 2 fails to be profitable and subsequently must close. There may also be impacts on the Region 1 and 3 casinos, but those would likely pale in comparison.

This brief analysis suggests that a tribal casino could be very costly to Massachusetts. The numbers here probably understate the cost. This is because the Commonwealth may be required to fund infrastructure improvements, and provide a variety of public services to the tribal casino and the surrounding region. These costs can be substantial, and there is no guarantee that the tribe would be required to cover such costs. This issue is discussed in more detail below.

Negotiating a tribal compact

The agreement in Connecticut to give tribal gambling exclusive rights to operate slot machines in return for 25 percent of gross slot revenues has turned out to be a very profitable arrangement for both parties. Foxwoods and Mohegan Sun contributed \$435 million to the state in 2007 alone.²⁶¹ The state has no commercial casinos, but it still sees significant tax revenues because of the large amount of tourism to Foxwoods and Mohegan Sun from neighboring states.

Massachusetts has currently and, with the introduction of commercial casinos, would still have significant flexibility in negotiating a compact for a tribal casino in the Commonwealth. A

²⁶⁰ Calculated \$100 million / \$263.4 million.

²⁶¹ Arthur Wright, “The state of play in New England casino gaming.” *The Connecticut Economy*, winter 2008, pp. 4-7.

prospective agreement should focus on a fair division of benefits for the sponsoring tribe as well as the taxpayers of Massachusetts. The Connecticut model, where the state receives a proportion of the gross gaming revenue, is a model to consider.

Costs to consider

The first, and most basic, consideration is for the state to be compensated for the costs it would incur in regulating a tribal casino. As the IGRA delegates the regulatory powers to the states, it also allows for the states to be compensated by tribal casinos for the costs of such regulation. The regulatory costs of casino gambling can be significant. In states with commercial casinos, the casino revenues are taxed to cover such regulatory costs. If a tribal casino is negotiated in Massachusetts, the compact should specify how the tribe would contribute to the state to help offset such regulatory costs.

There are other important issues to consider, as well. A recent article²⁶² points out some potential problems that states should be aware of prior to entering compact negotiations with tribes. Unless such issues are specifically addressed, state or local taxpayers adjacent to new tribal casinos may be responsible for paying for public services such as roads, utilities, police and medical emergency responses. As we previously noted, Connecticut's compact requires the Indian casinos to pay for the police investigations into crime committed on the casino floor but state officials did not require casinos to pay the cost of prosecuting those crimes. The result is that this is a taxpayer expense.

A casino development typically includes a large number of amenities, aside from the casino, including a hotel, restaurants, shopping, and other activities. All of these will act as attractions to Massachusetts residents and tourists. As a result, a tribal casino will result in a much larger traffic flow in the Middleborough area than it currently sees. The state will need to make significant improvements, in terms of street and highway capacity.

Furthermore, the larger traffic flow from casino visitors means there will be significantly more stress on the public services offered in the area surrounding the tribal casino. Often the city or state government is required to finance such public services, if such issues are not specifically outlined in a state-tribal compact. For example, with so many tourists, the existing police, fire, emergency response, and medical resources could be put under significant stress. Supplementing such resources will be very expensive and will be quite burdensome in per capita terms, depending on the size of the population to bear the costs.

Another issue to consider would be the environmental impacts of a casino development. Any large development in a city can have an impact on water and sewer systems, and may pose other environmental impacts and costs that should be considered.

Ellen Perlman explains that California's new model under the Schwarzenegger Administration may provide an example for others to follow to alleviate some of those concerns:

"All new compacts, and any amended ones, include requirements that the state get financial benefit from tribes and that impacts on local governments be taken into

²⁶² Ellen Perlman, "Tribes and tribulations." *Governing*. August 2007, pp. 52-54.

consideration. Since 2004, tribes under the new or amended compacts have been obligated to reach agreements with local communities on environmental, transportation, and other issues.”²⁶³

Massachusetts’ compact negotiations should strive to minimize any burden on local and state taxpayers. Furthermore, to the extent that the Commonwealth seeks to generate revenues from casino gaming, a compact could follow a Connecticut model in which the casino would agree to pay the state some fee or portion of gaming revenues in compensation for regulation and other costs incurred by the state’s taxpayers.

Regional monopoly rights

The Patrick Administration’s proposal is to have one casino in each of three regions in the Commonwealth. Taking the location of the casinos as given, the administration’s preference is that tribal casino interests focus on obtaining or partnering to obtain one of the commercial casino permits. This way, all of the casinos in the state would fall under the same regulatory regime, and all would be subject to taxation at the same rate; a level playing field on which the casinos can compete.

However, if a tribal casino outside of the commercial casino framework is inevitable, then the Administration must consider whether a tribal casino would compete with a Region 2 commercial casino, or if a tribal casino would replace a commercial casino in Region 2. As shown by the revenue projections presented earlier, the expected GGR for a Region 2 casino could be sizable. However, those revenue projections assume that there are no nearby casinos built, which would pose serious competition.

If the state negotiates a tribal compact for a Middleborough casino that would replace a commercial casino in Region 2, then the state could pursue an agreement whereby it agrees to protect the tribal casino’s regional monopoly in the state. It could do this by guaranteeing that no commercial casinos would be approved to be developed within a particular area surrounding the tribal casino. As a commercial casino located in the proximity of the tribal casino would pose significant competition to the tribal casino, it would undoubtedly cause a significant reduction in the GGR of the tribal casino. A regional monopoly would therefore be extremely valuable to the tribal casino.

Perhaps if a tribal casino is inevitable, the state could negotiate a compact in which the state agrees to prevent commercial casino development in the region surrounding the tribal casino, in return for a specified annual fee. This would be similar in spirit to the agreement reached in Connecticut. Of course, as the law develops in this area, the ability for the Commonwealth to negotiate such fees may be subject to legal actions and decisions.

It would appear that the Commonwealth’s negotiating position was weakened by the recent NIGC decision that will allow Class II machines to more closely resemble Las Vegas-style slots. As the *Boston Herald* described the situation: “The federal commission that oversees

²⁶³ Ellen Perlman, “Tribes and tribulations.” *Governing*. August 2007, pp. 52-54.

Indian gaming has scrapped a crackdown on Class II bingo slot machines, a move that would have taken a key casino option off the table for the Cape Cod tribe. The decision by the National Indian Gaming Commission frees up the (Mashpee Wampanoag) tribe to use a key bargaining chip as it prepares to push for state approval for a full-scale casino. If all else fails and state lawmakers refuse to legalize a Mohegan Sun or Foxwoods style casino, the tribe has argued it could still go ahead with a gambling venue featuring bingo slot machines.²⁶⁴

One way of forestalling having to act on the Region 2 situation – whether a tribal casino will be built, or whether such land will be put in federal trust status – would be to stagger the permit bidding process, as discussed earlier in this report. If the Commonwealth begins by accepting and acting on bids first for the Boston area (Region 1) casino, this would buy some time to resolve the situation in Region 2. Under a staggered bidding process, all of the stakeholders in the process would have more information than if all of the commercial permits are allocated simultaneously. More information is better information, and this will be useful to all parties in the process.

As tribal casino compacts have developed across the United States, some researchers suggest that states now have more negotiation power than might have been intended by the IGRA.²⁶⁵ The result is that in many states, tribes are expected to pay the state governments more than just the costs of casino regulation as was specified in the IGRA. The details of a forthcoming compact in Massachusetts are not, of course, the focus of this report. But in analyzing how a tribal casino could affect commercial casinos in the state, the details of the compact could have an impact on the overall benefits to the state from commercial casinos.

The discussion in this section is obviously based on a number of assumptions, estimates, and unpredictable market conditions. What will happen in Region 2 of the state is still an important unknown. The Administration would likely prefer that tribal interests seek one of the commercial casino permits. But if the tribe seeks federal trust status for its land, or is otherwise able to build a casino under IGRA, then it would be a serious blow to commercial casinos in the state, in particular a casino in Region 2, even if the tribal casino is only Class II.²⁶⁶

Overall, we view it as likely that a tribal casino will eventually be built in Massachusetts if commercial casinos are approved. While this may lead to a decline in revenues for commercial casinos, and declines in state receipts from casinos, relative to what they otherwise might be, overall, even in this worst-case scenario, commercial casinos will still likely have a largely positive impact on Massachusetts. Obviously, it is in the best interest of the Commonwealth to have all casino gambling fall under the state's regulation and taxation frameworks. However, if that, in the end, is not the case, we have discussed some of the issues that the state should consider in entering state-tribal compact negotiations. The Commonwealth should work with extreme care to design a regulatory and tax system under which commercial casinos are not at too much of a competitive disadvantage relative to a tribal casino in the Commonwealth.

²⁶⁴ “Fed move makes Mass. Indian gaming more likely,” by Scott Van Voorhis, *Boston Herald*, June 12, 2008

²⁶⁵ Light and Rand (2005), pp. 56-59.

²⁶⁶ Until this year, the Seminole Tribe of Florida operated a Class II gaming operation of six casinos, including two enormously profitable Hard Rock-branded properties, estimated to generate gross gaming revenue of nearly \$1.5 billion.

To the extent that commercial casinos in Massachusetts face competitive disadvantages relative to a tribal casino, the citizens of Massachusetts will fail to realize some of the available economic benefits from casino gambling.

We add one other important consideration: Unless and until the uncertainty regarding a tribal casino in Massachusetts is resolved, that uncertainty will be perceived by capital markets and commercial operators as a heightened risk. Added risk is reflected in a higher cost of capital – i.e., sources of capital will demand greater returns to compensate for the increased risk. This will, as noted in detail earlier, result in less capital being invested, which would lead to fewer jobs, less gaming revenue and less overall benefit to the Commonwealth.

Conclusion

Spectrum professionals have witnessed the birth of many domestic and foreign casino industries over the past three decades, and we have taken particular note of the political process that accompanies such important policy decisions.

One common pitfall is to assume that all forms of gaming are essentially the same in that they operate under similar business models, compete for the same dollars and address the same public policies. As this report has endeavored to show in great detail, none of the above is true. The public sector has the opportunity at the outset to shape the nature of the industry it seeks to create, and to address the public policies that it has identified as priorities. That can only be accomplished, however, if public officials understand the critical differences between casinos that are designed to capture the convenience market and those that are designed to be destination resorts.

A second, equally important pitfall in the process is a desire to use casinos to fill potential budget shortfalls in the near term. This could lead to the anticipation of gaming revenue within a tight and, perhaps, overly optimistic timeframe.

Such practices are antithetical to the nature of effective regulation, and the need to develop a gaming industry that is best positioned to advance the public interest. This is particularly true at the outset of developing a casino industry, when the rules are being established and the decisions are being made that will have profound effects on the Commonwealth for many years into the future, long after the current fiscal problems have been addressed.

The opportunity exists in Massachusetts to set the highest standards for casino licensure, including a competitive bidding process that will be designed to attract the most creative, capital-intensive projects that can be built. No guarantee exists, however, that submitted proposals will meet those standards, certainly not within all three proposed regions.

Indeed, fiscal pressures work against some of the recommendations we have put forth in this analysis. For example, the suggestion that Massachusetts adopt a consecutive bidding process for all three regions, rather than a concurrent competition would not easily resolve short-term fiscal issues, and could put revenue generation by two casinos years off in the future.

We respectfully suggest, however, that the greater public interest requires the most responsible, creative, well-financed operators to participate in gaming, and that is less likely to occur if all such operators are bidding on the same potential license.

Additionally, we believe that fiscal pressures may be so great that they could prevent regulators from making what could be the most important decision of their tenure: a decision that potentially says no bidder for any particular license has met the Commonwealth's high standards. Such pressures could enhance the appeal of proposals to allow for the relatively quick installation of slots at racetracks or other facilities, but we reiterate that such facilities would likely have different business models than destination casinos, and would thus be less likely to advance the same public policies.

As noted, one means of generating revenue early would be to allow for the development of temporary facilities that could potentially be open within two years of the passage of legislation. This has been proven effective in other markets, from Michigan to Pennsylvania, as a way to generate revenue without compromising the principles of integrity.

We began this analysis with the suggestion that the power of the public sector is at its zenith at the earliest stage of this process. The analysis we have developed supports that notion.

The Commonwealth of Massachusetts is considering legislation to grant up to three private businesses the privilege of operating regional monopolies. Such privileges must be accompanied by heightened responsibilities to operate in the public interest. The ability of public officials to hold those licensees to those responsibilities is at its greatest before the licenses have been issued.

Our analysis rests on two core recommendations. To build a successful casino industry in Massachusetts:

- Maintain the highest possible degree of independence from fiscal pressure to help ensure the highest quality facilities that operate in the public interest.
- Develop a competitive bidding process that awards licenses to applicants who fully recognize their responsibilities to the Commonwealth, and have developed plans to address those responsibilities.

Appendix A:

Summary of an “Act to Establish and Regulate Resort Casinos in the Commonwealth of Massachusetts”

Submitted to the Legislature October 11, 2007

The legislation introduced by the administration of Governor Deval Patrick allows for licensing of three destination resort casinos in different regions of the state. The administration expects the three resort casinos to generate a total gross win of \$2 billion.

Applicants must:

- Pay a non-refundable fee of \$350,000 for their application to be reviewed.
- Commit to a \$1 billion investment outside of land acquisition costs.
- Compete against each other for three licenses. The minimum licensing bid is \$200 million. Each license is renewable every 10 years.
- Pay a minimum of 27 percent of the casino’s gross revenues to the state or \$100 million a year, whichever is higher.
- Pay an assessment each year on slot machines and gaming tables to cover regulatory costs.
- Ensure a return to patrons of at least 85 percent of all sums wagered on slot machines.
- Operate a smoke-free casino.

A seven-member Gaming Control Authority will be created to oversee casino operations. Standards will be developed to grade licensees based on “the highest and best value” to the region and Commonwealth. The licenses do not have to be awarded to the highest bidder.

Revenues will be used for:

- Direct property tax relief in the form of a rebate check to eligible homeowners. **Administration estimate: \$200 million.**
- Transportation improvements. **Administration estimate: \$200 million.**
- A public health trust fund to help treat compulsive gamblers and address other social issues such as domestic violence. **Administration estimate: \$50 million.**
- A community mitigation trust fund to compensate host and surrounding towns for costs incurred to accommodate the resort casinos. **Administration estimate: \$50 million.**
- Assistance to the lottery to assure it of a 3 percent annual growth rate in gross revenues.

Requirements of a successful licensee

Casinos must:

- Possess a debt-to-equity ratio of not more than 4:1.
- Hold a successful ballot question in the host community.
- Establish an agreement with the host community to compensate the town for costs incurred to accommodate the casino.
- Own the land where the casino will be built within 60 days after a license is awarded.
- Provide complimentary on-site space for an independent substance abuse and mental health counseling service.
- Develop a process so that patrons can exclude themselves from all marketing databases.
- Ensure that state lottery and keno games are readily available to guests.

Gaming Control Authority

It will consist of seven unpaid members, two of whom will be the state Auditor and state Treasurer. The governor will appoint the other five members. The board must have members with experience in:

- legal issues involving gaming establishments
- regulatory aspects needed for casinos
- finance
- accounting
- public health

None of the five gubernatorial appointments can hold or be a candidate for elected office. Three of the five gubernatorial appointees will serve terms of five years. The other two will serve terms that end with the governor's term in office. Five members will constitute a quorum. The governor will designate a chairman.

The board will hire an executive director who will report to the board. The board will:

- Determine the number of slot machines and table games in each casino.
- Conduct auctions, if necessary, to award licenses in three regions.
 - Region 1 - Suffolk, Middlesex and Essex counties.
 - Region 2 - Norfolk, Bristol, Plymouth, Nantucket, Dukes and Barnstable.
 - Region 3 - Worcester, Hampshire, Hampden, Franklin and Berkshire counties.

- Develop criteria to assess bids to provide “the highest and best value” to the state. Criteria will include overall economic benefit to the state, amount of the licensing fee (minimum \$200 million), amount of the gross revenue tax (minimum 27 percent), the number of permanent jobs created (minimum 5,000) over a five-year period, the extent to which public safety effects are mitigated, the extent to which the state is marketed as a tourist destination, proposed infrastructure improvements and economic development opportunities and extent of contracts with local and small business owners.
- Determine whether a license should be issued in one of the three regions. It is under no obligation to do so.
- Create regulations to recognize an employee’s license from out-of-state gaming schools and establish a process for reciprocal licensing of out-state-licensed employees.
- Adopt regulations related to the application process, background checks, license fee and the revocation, suspension and renewal of licenses.
- Register and license gaming suppliers and non-gaming suppliers. There is expected to be criteria developed for different classes of work permits.
- Develop regulations for the registration and licensing of labor unions and gaming schools.

Ethics restrictions

Anyone who knowingly violates the pre- or post-employment restrictions could be subjected to criminal violations that provide for penalties of up to five years in jail and a fine of up to \$100,000.

The restrictions bar employment at the authority of anyone who was employed during the three previous years by a casino licensee, a casino service industry licensee, or a dog or horse racing licensee in the Commonwealth.

Authority employees who terminate their employment must wait three years before accepting employment with any entity licensed or registered by the authority.

Within 30 days after taking office all board members and their spouses must file a statement of financial interests with the state ethics commission.

Executive branch members who terminate their employment must wait at least three years before they can work for the authority, a casino licensee, a casino service industry licensee, or a dog or horse racing licensee in the commonwealth

Prior to serving the authority, employees and board members must swear that they have no interest in any business or organization licensed by the authority.

Employees of the authority and board members are barred from gambling in any gaming establishment licensed by the authority.

Division of Gaming Investigation and Enforcement

The agency will be in the Attorney General's office. Its director will be an assistant attorney general. The State Police will assign troopers to the division.

The division will investigate crimes in the casinos, including those that impact gaming. It will conduct all background checks for employment. Its budget will be funded through a special assessment imposed on the casinos.

Advisory Committee

The authority will be advised by a 12-person unpaid advisory committee, consisting of the following secretaries: health and human services, administration and finance, housing and economic development, labor and public safety. The governor shall appoint three other members; one of whom will represent labor, another must be an expert on gaming addiction and the third must be a police chief. The Senate President will appoint two members and the House Speaker will appoint two members.

Appendix B:

Professor Barrow letter to Spectrum Gaming Group



Clyde W. Barrow
Center for Policy Analysis
University of Massachusetts Dartmouth
North Dartmouth, MA 02747-2300
Tel.: (508) 999-9265
Fax: (508) 999-8374
cbarrow@umassd.edu

May 19, 2008

Bill LaPenta
Director of Financial Analysis
Spectrum Gaming Group

Via: E-mail

Dear Mr. LaPenta:

I received your request for a summary of the assumptions that support the \$1.495 billion GGR estimate in the Center for Policy Analysis report, *Maximum Bet: A Preliminary Blueprint for Casino Gaming and Economic Development in Massachusetts* (August 2007). I have attached a spreadsheet that should assist you in your efforts to compare and contrast recent hypothetical Massachusetts gaming revenue projections.

However, before reviewing these assumptions, I would like to clarify one misperception about our report that has made its way into the statewide discussion via the *Worcester Telegraph & Telegram*, the Massachusetts Taxpayers Foundation (MTF) report and, more recently, an article by Eugene Christiansen of Christiansen Capital Advisors (CCA) in *Insight: The Journal of the North American Gaming Industry*. When we released *Maximum Bet* in August of 2007, we stated in the press release that it was “a conservative preliminary analysis.” In the report itself, we stated that our recommendations were a “preliminary blueprint for casino gaming and economic development in Massachusetts,” but that a “multitude of details – financial, political, legal, and regulatory” still needed to be worked out through the state and local political processes.

Thus, I want to emphasize that our estimates of GGR are *not* an estimate of market potential, but an estimate of GGR and tax revenues, based on a very conservative hypothetical proposal for three resort casinos that were much smaller than those eventually proposed by Governor Deval Patrick. Indeed, I have been repeatedly quoted in the press as stating that we estimate an unmet market demand for gaming in New England of about \$1.5 billion – not including the possibility of recapturing a significant share of existing Massachusetts and northern New England gaming dollars flowing to Connecticut and Rhode Island. Thus, our estimate of the *market potential* is actually in the \$2.0 to \$2.1 billion range, which is comparable to that estimated by the Governor’s staff and by UHY Advisors. I reiterated this estimate in

my oral and written testimony to the Joint Committee on Bonding, Capital Expenditures, and State Assets (12-18-08).

That said, these were our assumptions in *Maximum Bet*:

Location. Three resort casinos to be located at Suffolk Downs, Middleboro, and Palmer, Massachusetts. We accepted Middleboro as a hypothetical location with the expectation that the Mashpee Wampanoag Tribe could be induced into accepting a commercial license.

However, I have been quoted accurately several times in the media as stating that I consider New Bedford a superior location for purposes of environmental sustainability and economic development. New Bedford has a low educational attainment level, one of the highest unemployment rates in the state, and a high level of poverty and welfare dependency. It is a population that would greatly benefit from many of the types of jobs created by resort casinos. The proposed site in New Bedford is immediately contiguous to a major interstate highway (I-195) and it already has the municipal infrastructure to support a resort casino (i.e., water and sewer capacity and large fire and police departments). A resort casino is also compatible with New Bedford's local economic development strategy, which includes waterfront and tourism development. Finally, previous referenda, and more recent polls, indicate that New Bedford residents want to host a casino by a 3-1 margin.

In addition, based on proximity to population and income, regional propensity to gamble, and proximity to direct competition, it is our assessment that the Boston location is the most lucrative, followed by Southeastern Massachusetts and Western Massachusetts.

Capital Investment. The CFPA proposal suggested a minimum capital investment in each resort casino of \$500 million (as compared to the governor's proposal for a minimum investment of \$1billion).

This assumption was identified in *Maximum Bet* and it was the basis of our projection that casino construction would generate approximately 10,000 jobs. We utilize the IMPlan modeling system for deriving these estimates, but if we were to utilize the governor's \$1 billion minimum figure, our model would project about 20,000 construction jobs, which is consistent with the governor's staff estimates and those of UHY Advisors. Our differences are primarily due to different assumptions about the initial scale of the projects.

Gaming Positions. Our GGR estimates assume the following:

	Slot Machines	Win per Day	Table Games	Win per Day
Boston	5,000	\$300	200	\$2,250
SE Mass	3,500	\$300	150	\$2,100
W Mass	2,000	\$300	100	\$1,800

The slot win per day is comparable to Foxwoods (although slightly lower than Foxwoods), while the table game win per day is comparable to Atlantic City casinos. The CFPA proposal assumes 10,500 slot machines statewide, while the governor's proposal assumes 15,000.

Again, let me note that I do not see the GGR generated by these assumptions as the maximum market potential for Massachusetts, but given the politically controversial nature of the casino debate, I was also making two *political* assumptions:

(a) The state's racetracks have never been influential enough to pass slots-at-the-tracks legislation, but they have always had the support of enough legislators to block resort casino legislation. Consequently, the CFPA proposal left enough slack in the market to accommodate slots, or preferably video lottery terminals (VLTs), at the state's two Southeastern Massachusetts racetracks. My assumption here was that Suffolk Downs would become a resort casino and that Wonderland would either reach an agreement with Suffolk Downs to provide support services (it was being discussed between them at the time) or it would be put out of business by a pending referendum to outlaw greyhound racing in Massachusetts.

Although the governor's main focus was rightly on economic development, it has always been my experience that state legislators are more focused on tax revenues, which makes VLTs at the tracks quite appealing to them, even though "racinos" do not produce the jobs, capital investment, or long-term economic development associated with resort casinos. At the time, the state's track owners were publicly offering to accept a 50% gaming tax on their facilities in contrast to the 27% tax on casinos eventually proposed by the governor (and by the CFPA). Thus, it was my expectation that a compromise would probably become necessary as the casino debate proceeded through the state legislature – a compromise that would balance the competing demands for long-term economic development and the desire immediate state revenues.

Moreover, as a lottery product, VLT revenues would become part of the state's lottery aid distribution formula and, therefore, further allay concerns about the casinos' impact on the state lottery and local aid.

(b) Even if a slots-at-the-track compromise did not pass, it was still my assessment that an incremental approach to gaming expansion would be more politically viable in Massachusetts and that as gaming revenues demonstrated the market potential in the state, a Gaming Control Authority would be able to authorize an incremental expansion of gaming positions at the three facilities based on actual revenues trends and visitations with the goal of eventually capturing all unmet demand.

Gaming Tax Rate. 27% of Gross Gaming Revenues. This is approximately the average effective gaming tax rate for all non-traditional commercial casino venues in the United States.

Hotel Revenues and Occupancy Taxes. We assumed that each casino would have a 500-room hotel with a 90% occupancy rate and average revenues per occupied room of \$112 per night. The occupancy rate is slightly below that for Mohegan Sun (93%) and the revenues per night are similar to those reported for Mohegan Sun in FY 2006 and FY 2007.

We assume the existing state room occupancy tax of 4%, plus a local room occupancy tax of 4%.

Retail & Meals. We assumed that revenues from retail and food and beverage would initially be equal to 10% of gross gaming revenues, which is a low estimate, but it is consistent with the revenues reported at Mohegan Sun in its first few years of operation. We assume the state's 5% retail sales and meals taxes in projecting tax revenues.

Regulatory Costs. To defray the costs of regulation, the CFPA proposed a annual "positions tax" on slots (\$1,500) and table games (\$750), which generates about \$16.1 million. We also proposed employee licensing fees of \$150 per year, which generates another \$1.5 million annually. This yields

about \$17.6 million to defray the costs of regulation, which is equal to 1.2% of estimated GGR. This figure would place Massachusetts at the high end of commercial casino states in terms of spending (as a ratio of GGR) on casino licensing, regulation, and enforcement.

Lottery Impact. We assumed an initial 8% “hit” on state lottery revenues, based on a report conducted for the Massachusetts Lottery by Christiansen Capital Advisors. CCA estimated a temporary reduction in lottery revenues of 3% to 8% and in keeping with our conservative approach to the issue, we adopted the higher estimate.

This estimate is also consistent with previous work we released in 1999 and 2004 that examined the actual impact on lottery revenues in jurisdictions that introduced commercial casinos after their lottery had reached maturity.

Finally, it was my expectation that these preliminary estimates would be greatly refined with gravity models, and other market analyses, as the issue moved forward, because local communities or potential casino operators would normally commission economic and fiscal impact studies that were locality and facility specific. Indeed, the governor’s proposed casino legislation required that potential bidders pay a \$350,000 application fee to defray the cost of conducting or reviewing such studies, but as you know the legislation did not pass.

Sincerely,

Clyde W. Barrow, Ph.D., Director
Center for Policy Analysis