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## NET ECONOMIC IMPACT

The net economic impact of a project can be defined as the total economic value that results from a project, less any economic costs. The positive impacts come in the form of direct impacts (labor, materials, supplies, capital), indirect impacts (the purchase of goods and services by suppliers as well as the labor required to meet demand), and induced impacts (increased purchases made at the household level). The economic costs are those associated with substitution or displacement (sometime referred to as cannibalization), where expenditures are transferred from existing businesses to a new business. A discussion paper on the impacts of gambling by the Federal Reserve Bank of Philadelphia suggests that the classic multiplier approach is the most straightforward method for estimating the net economic impacts. While such an analysis does provide an estimate for the economic impact, it does not account for other costs such as social costs, increased infrastructure or safety expenditures, or the opportunity costs of foregoing alternative development opportunities.<sup>9</sup>

To conduct an analysis of the economic impact of casino gaming in Hampton Roads, staff employed the Hampton Roads Planning District Commission's REMI model. The REMI<sup>10</sup> model (Regional Economic Models, Inc.) utilizes the classical multiplier approach, and is considered one of the most advanced and sophisticated dynamic forecasting and policy analysis tools available on the market, widely recognized for quality, accuracy, and integrity. The REMI model has been used in numerous casino analyses, including studies on gaming in Pennsylvania, Massachusetts, and New Hampshire.

The net economic impact of a casino would be dependent on many factors, including the size of the establishment, the location of the establishment, the number of employees, the level of taxation, the degree to which the casino attracts outside visitors, the degree to which the casino retains gaming enthusiasts who would otherwise travel elsewhere, and the degree of development of companion industries (hotels, restaurants, entertainment, and retail). The determination of the ideal size and location of a casino (or multiple casinos) would require an extensive market analysis and an understanding of any regulatory restrictions with respect to casino development. In estimating the potential economic impact of casino gaming, staff assumed a conservative direct employment base of 2,000 (initial estimates from the Cordish Company suggested 3,000 employees, while the state of Delaware currently has 2,775 casino employees<sup>11</sup>). The REMI analysis conducted by staff yielded a high and low estimate, based on casino location, as well as higher and lower estimates of displacement of current business. The analysis suggests that casino gaming in Hampton Roads that had direct employment of 2,000 employees would result in a net increase of between 1,950 and 2,470 employees, increasing regional gross product by between \$77.9 million and \$107.1 million.

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<sup>9</sup> Mallach 2010

<sup>10</sup> Information about the REMI model, including the assumptions, equations, and detailed specifics of the model are available at [www.remi.com/resources/documentation](http://www.remi.com/resources/documentation) - PI+ version 1.5

<sup>11</sup> [http://www.americangaming.org/sites/default/files/uploads/docs/aga\\_sos2013\\_fnl.pdf](http://www.americangaming.org/sites/default/files/uploads/docs/aga_sos2013_fnl.pdf)

# CASINO GAMING IN HAMPTON ROADS

## Potential Economic Impact on Hampton Roads of a Casino with 2,000 Employees

<b>Total Employment</b> (Direct, Indirect, and Induced)	lower estimate	<b>1,950</b>
	higher estimate	<b>2,470</b>
<b>Increase in Gross Regional Product</b> (millions of 2014\$s)	lower estimate	<b>\$77.9</b>
	higher estimate	<b>\$107.1</b>
<b>Increase in Regional Personal Income</b> (millions of 2014\$s)	lower estimate	<b>\$65.5</b>
	higher estimate	<b>\$91.8</b>

Source: Hampton Roads Planning District Commission

Although there is a general consistency in estimating the projected economic impact of casino gaming, there are numerous studies based on empirical research that have sought to calculate the net economic impact of established casinos and gaming markets. The methodology used to determine these impacts varies significantly, as do the research findings. An extensive study estimating the impact of casino gambling in Wisconsin concluded that the total positive impact of \$1.4 billion was offset by \$1.1 billion in negative economic impacts and \$320 million in social costs, resulting in a negligible net economic impact of only \$5.8 million.<sup>12</sup> Studies of gaming in Illinois concluded that the net impact of gaming was actually negative,<sup>13</sup> while studies of statewide impacts in Iowa<sup>14</sup> and Missouri<sup>15</sup> found significant positive impacts.

The subject of substitution (also known as displacement or cannibalization) has been target of much research with respect to casino gambling. Because gaming is a form of entertainment, and entertainment is based on discretionary income, new gaming (or any form of entertainment) can result in simply shifting consumer expenditures from one form of entertainment to another. An analysis from the Federal Reserve Bank of Boston notes that "Casinos that cater to a local market generally do not bring outside money into the economy through the spending of their patrons. In fact, such casinos may have no net ancillary economic impacts."<sup>16</sup> One of the critiques of impact analysis that results in significant economic benefits is that these analyses narrowly define substitution, as was the case in the aforementioned Iowa impact analysis.<sup>17</sup>

Generally speaking, the largest determinant on the net economic impact of casino gaming on a region is likely to be the degree to which the casino attracts outside residents, and recaptures residents that would otherwise gamble elsewhere. According to a discussion paper from the Philadelphia Federal Reserve Bank, less than 15% of casino patrons in Las Vegas or Atlantic City are local residents, while 80% of the patrons from Detroit's casinos were local and 84% of Illinois riverboat patrons came from Illinois. One suggested

<sup>12</sup> Thompson, Gazel, and Rickman 1995

<sup>13</sup> Thompson and Gazel 1996

<sup>14</sup> Chhabra 2007

<sup>15</sup> Leven, Phares, and Louishomme 1998

<sup>16</sup> Brome 2006

<sup>17</sup> Mallach 2010

# CASINO GAMING IN HAMPTON ROADS

rule of thumb is that casinos are likely to have an overall negative regional impact unless more than 50% of their patrons come from outside of the region.<sup>18</sup> A study on the impacts of gaming taxation prepared for the American Gaming Association notes that tax rates are inversely related to capital investments, where low rates of taxation on gaming establishments encourage capital investment in casinos and enable gaming establishments to increase the amenities they offer. Low rates of taxation, such as are found in Nevada (6.75%) and New Jersey (8.0%) may thus increase the likelihood of developing a destination casino that can attract out-of-town visitors.<sup>19</sup>

## SOCIAL COSTS

There are a host of negative externalities or “social costs” that are generally attributed to casinos, such as increased poverty, increased crime, and the problem of pathological gambling. Unfortunately, there appears to be no single generally accepted methodology for determining the economic impacts of these social costs. As stated in a discussion paper from the Federal Reserve Bank of Philadelphia “From an economic perspective, accounting for the fiscal impact of the social costs imposed by casino gambling can be more problematic than measuring the gross economic or revenue impact, beginning with the complexity of defining precisely what can be considered “social costs,” and of those costs, which can reasonably be attributed to a casino, rather than to other factors also at work within society.<sup>20</sup>

In general, social costs arise from the negative externalities associated with three distinct aspects of problem gaming or other socially undesirable behavior potentially triggered by casinos:<sup>19</sup>

- 1) Costs borne by the individual exhibiting the behavior;
- 2) Costs borne by the family and friends of that individual; and
- 3) Costs borne by society.

“To the extent that the costs are knowingly and freely borne by the consumer or producer himself, they are referred to as private costs; but to the extent that they are not so borne but fall on the rest of society, they are referred to as social costs<sup>21</sup>.” That is to say that there are no social costs associated with a gambler who knowingly or rationally engages in gambling, just as there are no social costs associated with persons who purchase other forms of entertainment such as movies, concerts, or sporting events.<sup>22</sup>

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<sup>18</sup> Mallach 2010

<sup>19</sup> American Gaming Association 2005

<sup>20</sup> Mallach 2010

<sup>21</sup> Markandya & Pearce 1989

<sup>22</sup> Some have argued that because gamblers are disproportionately lower-income individuals, their disproportionate gambling losses represent a social cost or, alternatively, that casinos should be discouraged or banned because they prey on the poor (Reno 1997). These are paternalistic arguments, since they assume that lower-income people are less able than others to make rational judgments about the utility of a particular expenditure (Mallach 2010).

# CASINO GAMING IN HAMPTON ROADS

## Social Impacts Associated with Gambling

Type	Bearer of Costs	Description
Crime	Local communities, law enforcement, individuals, courts, corrections	Increase in crime associated with the introduction of a gambling facility. Majority of crime is monetary in nature (theft, burglary), but violent crimes may be associated as well.
Business and Employment Costs	Individual, family, economy, businesses	Increase in lost work days, lost productivity, and employment termination.
Bankruptcy	Individuals, banks, legal system, creditors	Bankruptcy as a result of gambling debts.
Mental Illness	Health insurer, treatment provider, family	Gambling is associated with mental illness such as depression and anxiety.
Suicide	Family	Problem and pathological gamblers have a higher risk for suicidal thoughts and committing suicide than the general public.
Social Services	Government, service agencies	These are the costs related to unemployment, welfare, and treatment costs due to individuals with problem gambling.
Regulatory Costs	Government	Government expenditures to operate a gambling regulatory agency.
Family Costs	Family	This includes costs associated with divorce, spousal separation, and child abuse and neglect, and domestic violence.
Abused Dollars	Family, friends, employers	These costs are those associated with money lost gambling that was taken from family, friends, or employers that is never reported as a crime.
Social Connections	Individuals, family, friends, communities	Reduction of social capital.
Political	Government, local communities	Increasing concentration of economic power could result in disproportionate political influence.

Source: New Hampshire Gaming Study Commission 2010

Two significant issues arise in assessing the social costs of casinos. First, many of the negative externalities commonly associated with problem gambling are not readily quantifiable, such as the costs borne by family and friends of a problem gambler. Second, it is unclear how much of any given cost is directly attributable to the presence of a casino. If gambling were not an option, a person who is predisposed to a pathological disorder may manifest his disorder in other, equally destructive ways.”<sup>23</sup>

<sup>23</sup> Walker and Barnett 1999

# CASINO GAMING IN HAMPTON ROADS

Crime is often the greatest fear associated with casino gambling,<sup>24</sup> and studies suggest that it generates the largest component of externality costs associated with casino gambling.<sup>25</sup> Several studies have shown an increased incidence of both index and non-index crime<sup>26</sup> following the opening of a casino.<sup>27</sup> An extensive analysis by Earl Grinols and David Mustard concluded that between 5.5% and 30% of crimes in casino counties can be associated with casinos, and that casinos increased all index level crimes except for murder. Furthermore, their analysis suggested that the impact of casinos on crime increased over time, as problem and pathological gamblers deplete resources, casino-induced changes in the population slowly take effect, and initial increases in law-enforcement subside.<sup>28</sup> Studies that show an increased incidence of casino-related crime have been criticized because they may fail to account for increased number of visitors following the opening of a casino (which would decrease the rate of incidents per individual) and because they do not differentiate between higher crime rates from casinos and crime rates that may accompany any other type of entertainment venue.

The category of social costs most extensively studied is to do with costs associated with problem gambling and compulsive gambling, where cost estimates vary significantly.<sup>29</sup> The National Gambling Impact Study Commission (NGISC) concluded that the cost per problem gambler was \$560 per year, and \$1,050 for pathological gamblers, with lifetime costs of \$3,580 and \$7,250 respectively.<sup>30</sup> Other studies have estimated costs ranging \$15,000 per pathological gambler up to \$100,000.<sup>31</sup> The aforementioned analysis by Grinols and Mustard estimated that the social crime cost associated with casinos was \$75 per adult in 1996 (\$110 in 2013\$) for the county (jurisdiction) in which the casino was located.<sup>32</sup>

## CONCLUSION

Allowing the development of casino gaming in Hampton Roads presents a range of potential benefits and costs to the region. Analysis indicates that casino gaming in Hampton Roads does have the potential to generate significant tax revenues. Based on a moderate estimate of gross gaming receipts, and using the average gaming tax of 30%, casino gambling Hampton Roads is likely to generate approximately \$113

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<sup>24</sup> Giacomassi, David, Mark Nichols, and B. Grant Stitt 1999

<sup>25</sup> Grinols and Mustard 2006

<sup>26</sup> Under the Federal Uniform Crime Reporting System, index crimes include aggravated assault, murder, forcible rape, robbery, burglary, larceny-theft, motor vehicle theft, and arson. Non-index crimes are other crimes report to the police.

<sup>27</sup> Gazel, Rickman, and Thompson 2001

<sup>28</sup> Grinols and Mustard 2006

<sup>29</sup> Problem gambling is defined as behavior which causes disruption in major life areas, whereas pathological (a.k.a. compulsive) gambling is characterized by an addictive trait with an obsessive need to gamble resulting in increasingly negative circumstances.

<sup>30</sup> Gerstein et al. 1999

<sup>31</sup> Mallach 2010

<sup>32</sup> Grinols and Mustard 2006 (this does not include costs associated with regulatory costs, lost productivity, social service and welfare)

# CASINO GAMING IN HAMPTON ROADS

million in tax revenues. Other estimates based on methodologies used by casino gaming companies suggest potentially higher revenues.

While it is clear that gaming does generate revenue, it is less clear as to the overall economic and social impacts of casino gambling. In spite of the fact that gaming has been the subject of numerous in-depth studies, there is little consensus among researchers as to the overall societal impacts. Economic modeling suggests that the economic impact of a regional casino with 2,000 employees would result in an increase in gross regional product of between \$77.9 and \$107.1 million and increase regional employment between 1,950 and 2,470. Several studies do suggest, however, that the net economic impact could be substantially reduced depending on the level of substitution and displacement of other economic activity.

There are also a host of social costs associated with casino gambling, many of which are unquantifiable. Studies suggest that casinos increase the prevalence of crime, bankruptcy, mental illness and suicide, and pose additional social, regulatory, and business costs.

Further study is warranted to gain a better understanding of the impact of casino gaming on Hampton Roads. Clarification on the structure of gaming in the Commonwealth would allow for a more refined analysis of the potential revenues and the associated economic and social impacts.

# CASINO GAMING IN HAMPTON ROADS

## REFERENCE LIST

- Barnes, Steve. 2013. *The Real Cost of Casinos: A Health Equity Impact Assessment*. Wellesley Institute, (January 2013)
- Barrow, Clyde W. 2009. *Market Feasibility, Economic, & Fiscal Impact Analysis for Sagamore Crossing Golf Resort & Convention Center*. University of Massachusetts Dartmouth Center for Policy Analysis (January 2009)
- Barrow, Clyde W. et al. 2013. *Bring It On Home: An Overview of Gaming Behavior in New England*. University of Massachusetts Dartmouth Center for Policy Analysis (March 2013)
- Boccalandro, Bea. 2012. *Estimating the Monetized Social Benefits of Caesars Entertainment's Societal Contributions Featuring Harrah's Rincon Casino & Resort and Harrah's New Orleans Hotel & Casino*. VeraWorks, Inc.
- Brome, Heather. 2006. *Economic Impact of Casino Developments: Preliminary Memorandum*. Federal Reserve Bank of Boston
- Chhabra, Deepak. 2007. *Estimating Benefits and Costs of Casino Gambling in Iowa, United States*. Journal of Travel Research 46:2
- Christiansen Capital Advisors LLC. 2012. *Gaming Study and Economic Impact Analysis*. Prepared for the Rhode Island Department of Revenue (January 17, 2012)
- Collins, David and Heloen Lapsley. 2003. *The Social Costs and Benefits of Gambling: An Introduction to the Economic Issues*. Journal of Gambling Studies, 19:2
- Community Research Partners. 2010. *The Social Impact of Casinos: Literature Review and Cost Estimates*. Columbus, Ohio, January 21, 2010.
- Condliffe, Simon. 2012. *Pennsylvania Casinos' Cannibalization of Regional Gambling Revenues*. UNLV Gaming Research & Review Journal Vol. 16 Is. 1.
- Cotti, Chad D. and Dougmlas M. Walker. 2010. *The impact of casinos on fatal alcohol-related traffic accidents in the United States*. Journal of Health Economics 29.

# CASINO GAMING IN HAMPTON ROADS

- Cummings Associates. 2003. *Analysis of Current Markets fo Casino Gaming in Iowa, with Porjections for the Revenues and Impacts of Potential New Facilities*. Arlington, Massachusetts. (October 7, 2003)
- Delaware Valley Regional Planning Commission. 2006. *Impacts of Gaming in Greater Philadelphia*. Philadelphia, Dec 2006.
- Dice or No Dice: The Casino Debate in Massachusetts*. Spring 2011. University of Massachusetts Boston.
- Eadinton, William R. 1998. *Contributions of Casino-Style Gambling to Local Economies*. The Annals of the American Academy of Political and Social Sciency 53.
- Garrett, Thomas A. 2003. *Casino Gambling in America and Its Economic Impacts*. Federal Reserve Bank of St. Louis. (August 2003)
- Garrett, Thomas A. 2004. *Casino Gaming and Local Employment Trends*. Review, Federal Reserve Bank of St. Louis 86:1 (Jan/Feb 2004.=)
- Gazel, Ricardo. 1998. *The Economic Impacts of Casino Gambling at the State and Local Levels*. The Annals of American Academy of Political and Social Science 66. (March 1998)
- Gazel, Ricardo, Dan S. Rickman, and William N. Thompson, 2001. *Casino Gambling and Crime: A Panel Study of Wisconsin Counties*. Managerial and Decision Economics, 22
- Giacopassi, David, Mark Nichols, and B. Grant Stitt. 1999. *Attitudes of Community Leaders in New Casino Jurisdictions Regarding Casino Gambling's Effects on Crime and Quality of Life*. Journal of Gambling Studies Vol 15(2)
- Grinols, Earl L. and David B. Mustard. 2001. *Business Profitability versus Social Profitability: Evaluating Industries with Externalities, The Case of Casinos*. Managerial and Decision Economics, 22
- Grinols, Earl L. and David B. Mustard. 2006. *Cainos, Crime, and Community Costs*. The Review of Economics and Statistics, 88:1, February 2006.
- Harrah's. 2003. *Harrah's Survey 2003: Profile of the American Casino Gambler*. Harrah's License Company, LLC (September 2003)
- Harrah's. 2006. *Harrah's Survey 2006: Profile of the American Casino Gambler*. Harrah's License Company, LLC (June 2006)
- Hass Center for Business Reasearch and Economic Development. 2011. *The Economic and Social Impact of Casino Gambling in Florida*. University of West Florida, funded by Florida Chamber of Commerce Foundation (March 2011)

# CASINO GAMING IN HAMPTON ROADS

- HVS. 2004. *Using Concentric Ring Analysis to Approximate Future Gaming Win at Native American Casinos: The Role*. Online Article Accessed 8.1.2013 at <http://www.hvs.com/article/796/using-concentric-ring-analysis-to-appro> (Jan 26, 2004)
- Leven, Charles, Donald Phares, and Claude Louishomme. 1998. *The Economic Impact of Gaming in Missouri*. St. Louis: Civic Progress
- Mallach, Alan, 2010. *Economic and Social Impact of Introducing Casino Gambling: A Review and Assessment of the Literature*. Philadelphia: Federal Reserve Bank
- Markandya, A., and D.W. Pearce. 1989. *The Social Costs of Tobacco Smoking* British Journal of Addiction
- Missouri Gaming Commission. 2012. *Annual Report 2012*.
- Monchuk, Daniel C. 2007. *People Rush in, Empty Their Pockets, and Scuttle Out: Economic Impacts of Gambling on the Waterways*. The Journal of Regional Analysis & Policy 37(3)
- National Gambling Impact Study Commission. 1999. *Gambling Impact and Behavior Study*. Gemini Research, The Lewin Group (April 1, 1999).
- New Hampshire Gaming Study Commission. 2010. *Final Report Findings of the New Hampshire Gaming Study Commission*. (May 18, 2010).
- New Hampshire Center for Public Policy Studies. 2013. *Gambling and New Hampshire. Presentation to the Board*. January 2013.
- New Hampshire Center for Public Policy Studies. 2013. *Expanded Gambling and Manchester, NH. Presentation to the Manchester Development Corporation*. April 12, 2013.
- Phares, Don. 2001. *The Spending Displacement Effect and Gaming's Net Economic Impact*. The 2001 Missouri Economics Conference, Columbia, Mo. May 2001.
- REMI. 2006. *Potential Economic Impacts of the Proposed Sands Bethworks Development*. Prepared for BethWorks Now, LLC. November 1<sup>st</sup>, 2006.
- Reno, Ronald A. 1997. *Gambling and the Poor*. Colorado Springs: Focus on the Family Commission on the Review of the National Policy Toward Gambling. 1976. *Final Report*. Washington
- Spectrum Gaming Group. 2010. *Market Analysis, Gross Gaming Revenue Projections: An Update*. Prepared for the Massachusetts Legislature (March 31, 2010)

# CASINO GAMING IN HAMPTON ROADS

Tannenwals, Robert Ed. 1995. *Casino Development: How would casinos affect New England's economy?* Federal Reserve Bank of Boston, June 1, 1995.

Thompson, William N., Ricardo Gazel, and Dan Rickman. 1995. *The Economic Impact of Native American Gaming in Wisconsin*. Hartland, WI: Wisconsin Policy Research Institute

UHY Advisors FLVS, Inc. 2012. *Casino Gaming in Massachusetts: An Economic, Fiscal, and Social Analysis*. Study Commissioned by the Greater Boston Chamber of Commerce

Walker, Douglas M., and A.H. Barnett. 1999. The Social Costs of Gambling: An Economic Perspective. *Journal of Gambling Studies*, 15:3

Walker, Douglas M. and John D. Jackson. 2007. *Do Casinos Cause Economic Growth?* *American Journal of Economics and Sociology* Vol. 66, No. 3. (July 2007).

Wenz, Michael. 2008. *Matching Estimation, Casino Gambling and the Quality of Life*. *The Annals of Regional Science*. 42:1