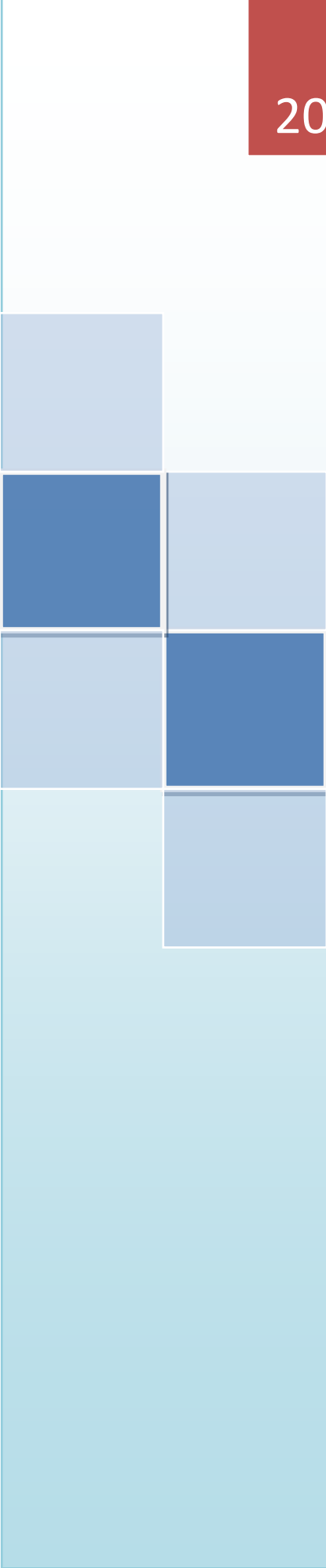




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# THE SOCIAL AND ECONOMIC IMPACTS OF GAMBLING

**Robert J. Williams, Ph.D.**

Professor, Faculty of Health Sciences, and  
Coordinator, Alberta Gaming Research Institute  
University of Lethbridge, Lethbridge, Alberta, Canada

**Jürgen Rehm, Ph.D.**

Director, Social and Epidemiological Research Department, Centre for  
Addiction and Mental Health (CAMH), Toronto, Canada  
Senior Scientist and Co-Head, Section Public Health and Regulatory Policies,  
CAMH, Toronto, Canada  
Professor and Chair, Addiction Policy, Dalla Lana School of Public Health,  
University of Toronto (UoT), Canada  
Professor, Dept. of Psychiatry, Faculty of Medicine, UoT, Canada  
Head, Epidemiological Research Unit, Technische Universität Dresden,  
Klinische Psychologie & Psychotherapie, Dresden, Germany

**Rhys M.G. Stevens, M.L.I.S.**

Librarian, Alberta Gaming Research Institute  
University of Lethbridge, Lethbridge, Alberta, Canada

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- Ontario Problem Gambling Research Centre

## Contact Information

Dr. Robert J. Williams  
 Professor, Faculty of Health Sciences &  
 Coordinator, Alberta Gaming Research Institute  
 3017 Markin Hall  
 University of Lethbridge  
 Lethbridge, Alberta  
 Canada; T1K 3M4  
 403-382-7128 (phone)  
[robert.williams@uleth.ca](mailto:robert.williams@uleth.ca)

Dr. Juergen Rehm  
 416-435-8501 x6173 (phone)  
[jtrehm@aol.com](mailto:jtrehm@aol.com)

Mr. Rhys Stevens  
 403-329-5176 (phone)  
[Rhys.stevens@uleth.ca](mailto:Rhys.stevens@uleth.ca)

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## SUMMARY

There has been considerable debate about the best methodological and theoretical approach to analyzing the social and economic impacts of gambling, with one of the central issues being how to aggregate the social impacts with the financial impacts to arrive at an overall summative measure. However, there is no reliable way of doing this. Judging the overall positive or negative nature of gambling will always be a subjective determination about the relative importance of the observed social impacts compared to the observed economic impacts. This does not mean that high quality socioeconomic analyses of gambling cannot be conducted. Rather, there are many basic principles for conducting socioeconomic impact studies that can ensure that the obtained results are comprehensive, provide a meaningful accounting of the social impacts of gambling, and are scientifically rigorous. These principles are outlined in the first section of this paper.

In light of these methodological principles, the second section of this paper provides an exhaustive review of what is known about the social and economic impacts of gambling. A total of 492 studies were identified, 293 of which were empirical investigations. Study quality was uneven, with only 51 of these empirical studies being rated as good or excellent. Although 70% of the socioeconomic literature has been published since 2000, the study period of the empirical investigations has primarily been in the 1990s (55% of studies). The large majority of the empirical studies have been conducted in the United States (62%). The only other countries with significant numbers of investigations have been Canada (16%), Australia (8%), and New Zealand (4%). The impact of casinos has been the focus of most of these investigations (57%), followed by study of multiple forms of gambling (26%), EGMs (10%), lotteries (6%), Internet gambling (1.4%), and horse racing (0.7%). Certain types of impacts have been investigated more thoroughly than others, with the most commonly examined impact areas being: government revenue (27% of studies), employment (27%), problem gambling and related indices (24%, primarily prevalence rates and bankruptcy), non-gambling business revenue (23%), crime (16%), public services (15%), and attitudes (12%). Fewer than 10% of studies examined impacts in the areas of infrastructure costs, regulatory costs, quality of life, infrastructure value, socioeconomic inequality, property values, personal income, leisure activity, and business starts and failures.

Analysis of these empirical studies shows that the most reliable impact of gambling across all forms of gambling is an increase in **government revenue**. However, there are occasional situations where the introduction of a new form of gambling contributing to government revenue primarily cuts into the revenue of another form that also contributes to government revenue. There are also occasional situations where government revenue decreases: a) the newly introduced form contributes less to government revenue (e.g., Indian casinos) than the forms that are negatively impacted (e.g., state lotteries); or b) if a newly introduced form that does not contribute to government revenue (e.g., Indian casinos) negatively impacts personal income and business revenue that is subject to government taxation. Finally, in cases where gambling revenue is derived in a local area (e.g., community hosting a casino), but the revenue

goes to the state or federal government, there can be losses to local municipal governments if they do not receive equivalent value back in the form of state or federal services.

Not surprisingly, the evidence also shows that the **enhancement of public services** (e.g., health, education, social security) is also a fairly reliable impact of gambling introduction. However, it is also sometimes the case that government gambling revenue is used to avoid raising taxes, reduce government debt, or just to maintain rather than enhance existing services. It is also the case that new forms of government and/or privately delivered gambling (e.g., casinos) can sometimes negatively impact public services by their direct competition with and negative impact on traditional charitable gambling revenue.

Government typically provides the regulatory oversight over gambling operations. Thus, all studies that have examined this issue have found **regulatory costs** to increase with the introduction of gambling. These administrative/regulatory costs are increased in jurisdictions where the government is also directly involved in the commercial provision of gambling. However, these studies also point out that the revenue governments receive from gambling usually significantly outweighs these costs.

The construction of new gambling venues (e.g., casinos) reliably adds to the physical assets and wealth of the community and thereby reliably increases **infrastructure value**, albeit to a small degree. This is especially true if the new venue is associated with upgrades (e.g., roads, electrical, sewage) to accommodate the new facility and the new building and infrastructure upgrades are financed by out-of-jurisdiction investors. Increased infrastructure value can also occur in the situation where this new gambling revenue stimulates the construction of complementary businesses (e.g., hotels, restaurants) to take advantage of the increased patronage of the area. These positive impacts on infrastructure value primarily occur for types of gambling that involve the construction of new venues (casinos, horse race tracks, bingo halls) as opposed to examples such as Internet gambling or adding EGMs to bars. The magnitude of the increase in infrastructure value is often a function of how well developed the existing infrastructure is, with larger gains occurring in impoverished areas (e.g., Aboriginal reserves).

The introduction of a new gambling venue usually increases **infrastructure costs**. This occurs when physical infrastructure upgrades for new gambling venues are financed by government rather than by a private developer. Service upgrades that are needed (e.g., police, fire services, public transportation) are costs that are usually borne by government, as is the maintenance of physical infrastructure (e.g., roads, utilities, sewage). Most studies that identified infrastructure costs have found them to be relatively minor and to be offset to some extent by increased infrastructure value.

The introduction of gambling often has beneficial **impacts on other businesses** in the local area in terms of increased revenue, business starts, and overall **employment** *when a significant portion of its patron base is from outside the area*. This is particularly true when the number of visitors is large relative to the local population, when the area was previously economically impoverished, and when visitation requires overnight stays. Hospitality services tend to be the

industry sector that experiences the most economic benefits. However, when the patron base is *from the local area* it is more likely there will be negative impacts on other local businesses. In either case, regardless of patron origin, any benefits to gambling venues, other businesses, or any specific geographic area usually occurs at the expense of other business sectors and/or geographic areas. The caveat to this general substitution effect is that there may be some potential for gambling to increase overall economic activity in its first few years of introduction without negative impacts on other industry.

The introduction of gambling usually does not impact **personal income** except in the situation where gambling brings in new revenue from outside the community and there is a significant degree of impoverishment prior to gambling introduction. This effect is most evident with the introduction of destination casinos hosted by Native American communities in the United States.

Casino introduction can increase **property values** or have no impact. Factors that appear to mediate whether there is a positive or neutral effect concern the property value of the area before the introduction of a casino (with impoverished areas more likely to experience property value gains), and zoning regulations which may restrict casinos to areas less sensitive to price changes (e.g., industrial areas).

One of the main negative impacts of gambling introduction is an increase in **problem gambling and its related indices** (e.g., bankruptcy, divorce, suicide, treatment numbers). The bulk of the impacts tend to be social/nonmonetary in nature because only the minority of problem gamblers seek or receive treatment, and only a minority typically have police/child welfare/employment involvement. Most of the increase in problem gambling occurs after the initial introduction of gambling, with progressively less impacts on problem gambling occurring with extended exposure. It is also important to recognize two things: a) the *legal* availability of a gambling is only partly responsible for the prevalence of problem gambling (i.e., problem gambling existed to some extent in all jurisdictions prior to legal provision), and; b) problem gambling is only partly responsible for these serious consequences (i.e., the mental health and substance abuse comorbidities of problem gamblers are additional contributing factors). A controlled before-after comparison of changes in rates of problem gambling and related indices coincident with the introduction of a new form of gambling will reliably identify the unique impact that this new form of gambling has on increasing these rates. However, this 'attributable fraction' will vary between jurisdictions depending on the type of gambling introduced, the magnitude of the change, and many other factors. This attributable fraction also does not identify the extent to which associated comorbidities have made people vulnerable to problem gambling and therefore susceptible to the impacts of this greater legal availability of gambling.

The impact that gambling has on **crime** is particularly complex and the results are mixed. Theoretically, the introduction of legal gambling should influence crime rates in one of several ways. One way is by decreasing the rate of illegal gambling, which tends to be a fairly reliable effect. A second is by increasing the number of problem gamblers, a minority of which engage

in crimes (primarily property crime) to support their gambling. A third is because certain forms of gambling (e.g., casinos) offer increased opportunities for illegal activity to occur (e.g., passing counterfeit money, money laundering, cheating-at-play). A fourth is by creation of venues that serve alcohol and thereby potentially contribute to alcohol-related offences, and/or venues that disproportionately attract a clientele with criminal tendencies. A fifth and final way is by increasing the overall number of visitors to the area (this population is often not taken into account when determining a jurisdiction's crime rate per capita). Thus, although there are good theoretical reasons to usually expect a positive relationship between gambling introduction and crime, it may not always manifest itself. There are many other factors that can potentially mediate this relationship, such as extensive prior exposure to gambling, a relatively small increase in the availability of gambling relative to population size, a temporal lag whereby crime increases take several years to occur, or the existence of jurisdictional policies that protect against the negative impacts of gambling. Because the magnitude of the increase in crime is not that large in most of these reviewed studies, the presence of any of these other moderating factors has potential to negate the increased crime effect.

Research confirms that lower income people consistently contribute proportionally more of their income to gambling than do middle and high income groups (**'socioeconomic inequality'**). However, average annual expenditure on gambling still tends to increase as a function of income class. Thus, total gambling revenue is still primarily contributed by middle and higher income groups. The only exception to this finding of regressivity concerns Internet gambling, where the limited existing research indicates it to be less likely to be regressive, as computer savvy Internet gamblers tend to be better educated and have higher incomes.

One of the important and unambiguous positive impacts of gambling is that it offers entertainment value and an additional **leisure option** for the population. However, gambling represents an *important* recreational activity to a fairly small segment of the population. The purchase of lottery tickets is the only type of gambling in which the majority of the population participate. Furthermore, when surveyed, only a small percentage of people typically report that gambling is a "very important" leisure activity for them or that it has replaced other leisure activities.

Community leaders in government and business tend to have positive **attitudes** about the impact of gambling, emphasizing its ability to generate additional revenue and economic benefits. In contrast, the attitude of the general population toward gambling is much more negative. In most cases, direct and/or extended exposure to gambling has tended to increase negative public attitudes. This is not always the case, as there are some jurisdictions that have experienced significant economic benefits and consider the positives to outweigh the negatives. Although most people consider gambling's impacts to be more negative than positive, it is important to recognize that most people do not consider gambling to be immoral, and most people agree that gambling revenue tends to go to appropriate causes. There are also significant demographic differences, with younger people, males, and heavier gamblers tending to have more positive attitudes toward gambling.

Arguably the most important impact of gambling concerns its overall impact on the **quality of people's lives**. Unfortunately, impacts in this area are also the most difficult to measure. The most common report of positive impacts concerns the significant improvement in general living conditions and/or public health in North American Aboriginal communities that have hosted a successful new casino development. While positive impacts on general living conditions are to be expected for profitable casinos in impoverished areas, studies that have looked at the impact of casinos in non-Aboriginal communities have tended to find very little impact on overall quality of life. From a theoretical perspective, population-wide changes in quality of life seems unlikely when regular gambling involvement tends to be restricted to a small percentage of the population and gambling revenue constitutes a very small percentage of most jurisdictional gross domestic product (GDP). Thus a more pertinent question concerns the *individual* impact of gambling involvement. In this regard, it is well established that heavy involvement in gambling is associated with poorer mental health, as heavy involvement is characteristic of problem gamblers. The negative impacts that problem gamblers experience, in turn, negatively impacts their families. When excluding heavy and/or problem gamblers from the analysis, there is relatively little difference in subjective well-being between gamblers and non-gamblers or between occasional gamblers and more frequent gamblers.

In general, the most consistent economic impacts across all forms of gambling tends to be increased government revenue, increased public services, increased regulatory costs (a relatively minor expense), and either positive or negative impacts on non-gambling businesses. The most consistent social impacts across all forms of gambling tends to be increased problem gambling (with most of this increase occurring after initial introduction), increased crime (to a small extent), increased socioeconomic inequality (to a small extent), and more negative attitudes toward gambling.

There are different impacts as a function of type of gambling. Formats that generate the most revenue (casinos, EGMs) and that are the most likely to be directly delivered by governments (lotteries) have the most reliable positive impacts on government revenue and the accompanying public services that may derive from this. Forms of gambling that are more likely to be delivered by government (lotteries) will also have more regulatory/administrative costs. Forms of gambling that are venue based (casinos, horse race tracks) are the only ones with the potential to add to the infrastructure value of the jurisdiction and also the only forms likely to impose infrastructure costs. Destination casinos have the greatest potential to bring in revenue from outside the local area, and thus, the greatest potential to create broad economic benefits to other local businesses in terms of revenue, business starts, and employment. Horse racing tends to support a wider range of businesses than other forms of gambling. EGMs and lotteries have a greater potential to divert money away from other local businesses and thereby negatively impact them. Casinos have the greatest potential to increase property values. Continuous forms of gambling (casino table games, EGMs) and forms of gambling with 24 hr accessibility (Internet gambling) have greater potential to increase problem gambling. Casinos have the greatest potential to increase crime, and lotteries have the greatest potential to decrease crime. EGMs are the least labour intensive form of gambling and are most likely to decrease overall employment, whereas horse racing and casinos have the greatest potential for



increasing employment. Internet gambling is the only form of gambling that may not be economically regressive. Lotteries are the only form of gambling that reliably adds to the leisure options of most people. EGMs and Internet gambling have greater potential for negatively impacting attitudes toward gambling. Destination casinos have the greatest potential for improving the quality of life for impoverished communities, whereas non-destination casinos and EGMs have the greatest potential for decreasing quality of life.

The impacts of gambling can vary considerably between jurisdictions, as the impacts are strongly mediated by a) the magnitude of the change in gambling availability that has occurred for the population; b) the type of gambling that is being introduced; c) the length of time that gambling has been legally available in the jurisdiction prior to the introduction of additional or new forms; d) whether patrons and revenues are locally derived or come from outside the jurisdiction; e) the type and extent of gambling opportunities in neighbouring jurisdictions; e) the strength of jurisdictional policies and educational programs to mitigate the negative effects of gambling; f) baseline levels of community impoverishment; g) whether the impacts are only being examined at a micro community-specific level, or whether larger macro regional impacts are taken into account; h) the length of the time in which impacts are being evaluated; and i) how gambling revenue is ultimately distributed.

Depending on these variables, the overall impact of gambling in a particular jurisdiction in a specific time period can range from small to large, and from strongly positive to strongly negative. *That being said, in most jurisdictions, in most time periods, the impacts of gambling tend to be mixed, with a range of mild positive economic impacts offset by a range of mild to moderate negative social impacts.*

There are 4 main areas that warrant further research:

1. The impacts of certain forms of gambling are not well identified. The highest priority for study is the impact of Internet gambling. Furthermore, excellent research opportunities currently exist for before-after and cross-jurisdictional comparisons. Other forms of gambling that also merit further study are social gambling (poker), lotteries, horse racing, and bingo.
2. Certain types of impacts have not been studied to any significant extent and would benefit from more research. Specifically, the impacts of gambling on property values, regulatory costs, social capital, and values.
3. More research is required on the social and economic impacts of gambling in European countries and non-Western jurisdictions.
4. More research is required on the impact of gambling on indigenous peoples outside of the United States (e.g., Canadian First Nations, Australian Aborigines, New Zealand Maori).

## THEORETICAL FRAMEWORK FOR CONDUCTING SOCIOECONOMIC IMPACT ANALYSES OF GAMBLING

The specific theoretical approach used to study the effects of gambling is a fundamentally important determinant of the results obtained, as well as the validity of these results. Unfortunately, there is considerable controversy about the appropriate theoretical and methodological approach to studying gambling impacts. These issues have been the focus of conferences ('Whistler Symposium' in British Columbia in 1999, the 'Social and Economic Costs and Benefits of Gambling' conference in Banff, Alberta in 2006); special issues of the *Journal of Gambling Studies* (June 2003) and the *Managerial and Decision Economics Journal* (June 2004); books (Grinols, 2004; Morse & Goss, 2007; Walker, 2007); and many individual articles (Anielski & Braatan, 2008; Australian Productivity Commission, 1999; Azmier, Kelley, Todosichuk, 2001; Barretta, 2004; Centre for Social & Health Outcomes Research & Evaluation, 2006; Collins & Lapsley, 2003; Committee on the Social and Economic Impact of Pathological Gambling, 1999; Eadington, 1998; Eadington, 2003; Gazel, 1998; Gerstein, Volberg, Harwood, & Christiansen, 2004; Grinols, 2007; Grinols & Mustard, 2001; 2008; Grinols & Omorov, 1996; Hawke, 2000; Hayward & Colman, 2004; Henriksson, 1996; 2001; Johnson, 2002; Kelly, 2004; Kindt, 1994; 2003; Korn, Gibbins, & Azmier, 2003; Korn & Shaffer, 1999; Marfels, 1998; McGowan, 1999; O'Neil, Chandler, & SA Centre for Economic Studies, 2009; Persky, 1995; Single, 2003; Stevens & Williams, 2004; Thompson, Gazel, & Rickman, 1995; Victorian Gambling Research Panel, 2001; Walker, 2003a, 2004, 2008a, 2008c, 2008d; Williams, 2011; Wynne & Shaffer, 2003).

Despite all of this work there is still not an agreed upon approach for assessing the socioeconomic impacts of gambling. There remain several contentious issues, with one of the central ones being how to capture and quantify the social impacts (Collins & Lapsley, 2003; Eadington, 2003; Walker, 2003a, 2008a, 2008c).

Some impact studies of gambling have simply ignored social impacts, choosing to only measure the most apparent and obvious economic benefits that are easily quantifiable (e.g., gambling revenue, tax revenue, employment numbers). Examples include Arthur Anderson's (1997) study of U.S. casino gambling, Littlepage et al.'s (2004) study of riverboat gambling in Indiana, studies of the economic impacts of racinos in Ontario (Brinkman & Weersink, 2004; Econometric Research Limited, 2005), and the Canadian Gaming Association's analysis of the impacts of gambling in Canada (HLT Advisory, 2008). However, this creates a very unbalanced analysis in that the positive economic impacts are not evaluated in the context of the negative social impacts. By way of example, it would be inappropriate if socioeconomic analyses of the effects of alcohol or tobacco just focused on the tax revenues, employment gains, support to the agricultural sector, and failed to mention the negative social impacts caused by consumption. However, failing to measure social impacts is a not an infrequent occurrence in the socioeconomic analysis of gambling.

Better quality socioeconomic impact studies have cast a wider net and included important social impacts such as problem gambling and crime. Further to this end, Anielski & Braatan (2008) have recently proposed a framework for analyzing the social and economic impacts of gambling that comprehensively assesses gambling's impact in 6 areas: Health and Well-Being; Economic and Financial; Employment and Education; Recreation and Tourism; Legal and Justice; and Culture. Within each of these areas there are specific costs and benefits of gambling that need to be addressed (a total of 34 variables/indicators).

The more problematic issue has been how to directly compare the social impacts with the financial/economic ones so that an overall determination of the positive or negative nature of gambling can be made. Some studies have attempted to do this by estimating the monetary value of these social impacts so that they can be combined with the monetary/economic impacts in other areas. This is the cost-benefit analysis (CBA) approach to gambling that is best illustrated by the work of the economist Earl Grinols (2004).

However, while determining the financial costs of some social impacts is reasonably straightforward (e.g., costs of treating problem gamblers, or the costs of prosecuting and incarcerating gambling-related crime), estimating costs for many other social impacts is not. This includes the costs of suicides, divorces, loss of social capital<sup>1</sup>, the leisure benefit of gambling, as well as the psychic trauma of being a problem gambler. Most often these latter types of social impacts are excluded from cost-benefit analyses. However, this exclusion seriously limits the comprehensiveness and fairness of the overall analysis. The alternative is to try to establish an approximate financial cost. For example, by asking people "how much would you pay not to be a problem gambler"; or tabulating the direct and indirect financial ramifications of gambling-related suicides (funeral costs, lost productivity, etc.); or trying to financially quantify the leisure benefit of gambling by calculating 'consumer surplus' (i.e., difference between what people would be willing to pay for gambling versus what they actually pay). Other examples of how to monetize social impacts are provided in Anielski & Braatan (2008) and Anielski & Wynne (2009) (this general approach being described as 'full-cost-benefit-accounting' by these investigators).

Unfortunately, the figures obtained from this approach are somewhat arbitrary and fairly unreliable, making them subject to widely different estimates. It also continues to remain unclear how to create a monetary value for some variables (e.g., loss of social capital). Even the strongest supporters of this full-cost-benefit approach acknowledge these serious difficulties. For example, Anielski & Wynne (2009) ended up abandoning this strategy in their socioeconomic impact study of gambling in Nova Scotia.<sup>2</sup>

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<sup>1</sup> Roughly defined as the degree of societal interconnectedness and shared interest.

<sup>2</sup> In turn, this incomplete analysis and inability to present a summative result may have been a contributing factor to the Nova Scotia government rejecting the Anielski & Wynne (2009) report, due to what they considered to be 'methodological flaws' (Jackson, 2010).

Aside from these practical issues, an argument can be made from a theoretical standpoint that it is inappropriate to apply an arbitrary monetary amount to something that is clearly nonmonetary in its value or consequences to the participant. Furthermore, doing so simply reinforces the erroneous notion that money is the appropriate and important metric upon which to judge the impact and/or the overall value of gambling.

This latter issue is not restricted to gambling. Widespread dissatisfaction with reliance on financial measures such as [gross domestic product](#) (GDP)<sup>3</sup> or CBA to measure societal progress or impacts on overall societal well-being has existed for many years (e.g., Atkinson, 2000; Daly & Cobb, 1989; Dasgupta & Maler, 2000; Tinbergen & Huetting, 1992). This situation has directly led to the development of several alternative measures to assess progress/impacts in a more comprehensive fashion. These measures include the United Nations [Human Development Index](#), the [Quality of Life Index](#), [Full Cost Accounting](#), the [Happy Planet Index](#), the [Canadian Index of Wellbeing](#), the [Index of Sustainable Economic Welfare](#), the [Green National Product](#) and the [Genuine Progress Indicator](#) (GPI). Most of these measures recognize economic productivity (e.g., GDP) as an important aspect to be considered, but they do not make it the central basis upon which a judgement about progress or societal well-being is made.

Unfortunately, while these approaches are more theoretically satisfying, they have practical problems of their own. First, although they all have similar goals, their specifics are markedly different from each other. This illustrates the fact that determining which indicators contribute to societal well-being is a very value-laden task that is not well agreed upon. Second, most of these approaches have the same problem as cost-benefit analysis in that they aspire to combine impacts into a single index, usually just by adding up the number of beneficial indicators against the detrimental ones. This is problematic because it makes all impacts equivalent in value and/or requires a subjective judgement about the relative value/weight of one impact against the others.

Unfortunately, the reality is that there is no reliable way of combining social impacts with monetary impacts to produce a single summative measure. *Instead, assessing the overall positive or negative nature of an enterprise that has wide ranging social and economic impacts (such as gambling) will always be a subjective judgement about the relative importance of the observed social impacts compared to the observed economic impacts.*

However, this fact does not preclude conducting meaningful socioeconomic analyses of gambling. Rather, there are many basic **principles for conducting socioeconomic impact studies** that can ensure that the obtained results are comprehensive, balanced, and scientifically rigorous. The purpose of the next section of this paper is to outline these principles. These principles are very much in the spirit of the Anielski & Braatan (2008)

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<sup>3</sup> GDP is defined as the dollar value of all goods and services produced in a jurisdiction over a one year time period (primarily measured by the aggregate volume of monetary transactions/sales that occur). This measure has been critiqued because although it provides a rough measure of the magnitude of economic activity, it does not measure whether this economic activity is sustainable, efficient, or conducive to societal well-being.

framework as they ensure there is a meaningful accounting of the social impacts of gambling. At the same time, they address the critiques of this framework (e.g., Walker, 2008d), and of socioeconomic research more generally, by a) proposing a simpler and more user-friendly categorization of impacts, b) providing a clearer description of how these impacts are to be evaluated and combined, c) enshrining basic principles of economic gain/value in the evaluation (Walker 2003, 2008a, 2008d; Walker & Barnett, 1999), and d) outlining scientifically rigorous strategies to better ensure things such as attributional fractions<sup>4</sup> and causal direction of the impacts can be better established.

## **PRINCIPLES FOR CONDUCTING SOCIOECONOMIC IMPACT ANALYSES OF GAMBLING**

### **Measure ‘Impacts’ rather than ‘Costs and Benefits’**

While many gambling impacts are clearly negative (e.g., increased problem gambling) or positive (e.g., employment gains), the positive or negative nature of several other changes is less clear and somewhat subjective (e.g., changed societal pattern of leisure pursuits, cannibalization of competing industries, increase in tax revenue). ‘Impact’ is often a better term as it conveys the fact that a change has occurred without having to necessarily characterize it as positive or negative. Use of this term also avoids confusion with the CBA use of the terms ‘cost’ and ‘benefit’.

### **Comprehensively Assess all Potential Economic and Social Impacts**

It is self evident that all impacts of gambling have to be included in an impact analysis. There are many different and equally legitimate ways of organizing and categorizing these impact areas. The Anielski & Braatan (2008) framework is one such organization, but there are many others<sup>5</sup>. The important thing is not the overall organization, but ensuring that a) all of the potential impact areas are covered, and b) economic/monetary impacts are given equal prominence to the social/nonmonetary impacts. The following is a suggested organization of the impact areas that is a simplified version of the Anielski & Braatan (2008) organization and which capitalizes on the economic/monetary versus social/nonmonetary distinction that is often made. It is also the organization used in the second part of this report that documents the pattern of impacts seen in different studies.

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<sup>4</sup> The term ‘attributal fractions’ has a couple of different meanings. In the present context the issue concerns how to appropriately proportion costs attributable to gambling, when many problem gamblers have comorbid disorders (e.g., substance abuse, mental health problems) that contribute to the negative consequences problem gamblers have such as suicide, divorce, and crime (Australia Productivity Commission, 1999; Crockford & el-Guebaly, 1998; Walker, 2008d).

<sup>5</sup> Anielski & Wynne (2009) themselves used a modified version of their 2008 framework for their socioeconomic impact study of Nova Scotia.

| <b>ECONOMIC IMPACTS (i.e., impacts that are primarily monetary in their nature)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Government Revenue                                                                  | Government revenue received directly from gambling provision or indirectly from taxation of businesses providing gambling. Taxes come in the form of licensing fees, property tax, corporate income tax, and goods and services taxes. It is also important to consider whether taxes may have risen if government had not received additional revenue from gambling.                                                                                                                                                                                                         |
| Public Services                                                                     | Changes in the quantity or quality of government or charity provided services (e.g., health care, education, social services, infrastructure, etc.) as a direct or indirect result of increased government revenue from gambling. <i>Note: this category could also be put in the Social Impacts section but is kept in the Economic Impacts section because of its close association with Government Revenue and because these services usually have a clear monetary value.</i>                                                                                             |
| Regulatory Costs                                                                    | Changes in the amount of government revenue directed to ensuring that the new form of gambling operates according to government regulation.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Infrastructure Value                                                                | The introduction of any buildings (e.g., casino), roads, and infrastructure upgrades which add to the capital wealth of the community and which are directly or indirectly attributable to the introduction of gambling.                                                                                                                                                                                                                                                                                                                                                      |
| Infrastructure Costs                                                                | The amount of revenue allocated by various levels of government to support the infrastructure needed to service new gambling facilities (i.e., road maintenance, utilities, fire services, police services). This does not include regulatory services or services specific to problem gambling.                                                                                                                                                                                                                                                                              |
| Business Starts and Failures                                                        | The number of new businesses as well as business failures (commercial bankruptcy) associated with gambling introduction. Certain businesses should receive particular attention because research has shown them to be more likely impacted by gambling introduction. Specifically, these are other forms of gambling (i.e., bingo, horse racing, lotteries); the hospitality industry (i.e., hotels, restaurants, lounges); the construction industry; pawnshops; cheque cashing stores; horse breeding and training operations; tourism; and other entertainment industries. |
| Business Revenue                                                                    | Changes in overall business revenue/sales in industries that are typically affected by the introduction of gambling. This does not include revenue received by the new forms of gambling.                                                                                                                                                                                                                                                                                                                                                                                     |
| Personal Income                                                                     | Changes in average personal income or rates of poverty associated with gambling introduction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Property Values                                                                     | Changes in property values in geographic areas proximate to new gambling venues.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| <b>SOCIAL IMPACTS (i.e., impacts that are primarily non-monetary in their nature)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Problem Gambling                                                                      | Changes in the prevalence of problem gambling and the main indices potentially associated with problem gambling (i.e., personal bankruptcy rates, divorce rates, suicide rates, treatment numbers). There are also monetary costs associated with changes in problem gambling that should be tabulated (and included in the Economic Impact section). Specifically, these are the amount of money spent on a) treatment and prevention; b) policing, prosecution, incarceration, and probation for gambling-related crime; c) child welfare involvement for gambling-related family problems; and d) unemployment and welfare payments and lost productivity because of gambling-related work problems. |
| Crime                                                                                 | Change in the rate of crime and gambling-related crime. This would also include any observed decreases in illegal gambling with the introduction of a legalized form.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Employment                                                                            | The number of full and part time jobs that are directly or indirectly created as a result of gambling introduction and the percentage of the general workforce that this represents.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Socioeconomic Inequality                                                              | Evidence that the introduction of gambling has a differential financial impact on people of different socioeconomic levels (e.g., potentially making it more or less 'regressive').                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Leisure Activity                                                                      | Changes in the pattern of leisure behaviour associated with gambling introduction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Public Attitudes                                                                      | Change in public attitudes associated with gambling introduction. This could include changed attitudes about gambling (e.g., perceived benefits/harms), or changed attitudes about government or the role of government for allowing/providing gambling, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Quality of Life/Public Health/Social Capital/Values                                   | Change in the general quality of life, state of public health, societal interconnectedness, societal values, and related indices. These indices are often difficult to measure and also difficult to attribute to the introduction of gambling. Nonetheless, they are relevant impacts if they exist, and if they can be captured.                                                                                                                                                                                                                                                                                                                                                                      |

### **Avoid Applying Arbitrary Monetary Values to Impacts that are clearly Non-Monetary in Nature.**

As mentioned earlier, it is a mistake not to capture social impacts that do not have significant monetary consequences. However, it is also a mistake to try to capture them within a cost-benefit economic framework by applying an arbitrary monetary value to them. This approach is an overextension of an economic worldview that fails to recognize that the true nature of the impact is largely non-monetary/economic in nature.

In most cases, social impacts are best quantified and reported *simply by means of percentage change in the variable and/or the actual number of people impacted (e.g., % change in rate of problem gambling, % change in crime, change in pattern of leisure behaviour, etc.)*.

## Create a Profile of the Economic and Social Impacts

The advantage of a common metric (e.g., money) is that it potentially allows for the combination of all impacts into an overall aggregate value. However, as mentioned, this approach is problematic because of a) difficulties applying monetary values to many social impacts, b) the need to construe everything as either a cost or benefit, c) the inappropriateness of using money as a way of characterizing the nature and magnitude of some social impacts (e.g., suicide).

*Thus, in most cases the best way of treating these impacts is to simply list them and to create a profile of impacts.* For most social impacts, reporting the percentage change in the variable and/or the percentage of people impacted is most descriptive. For many of the economic impacts a monetary value can be used to quantify the magnitude of the effect within each impact area. There can also be value in aggregating the monetary amounts within and/or across economic impact areas.

## Apply Basic Economic Principles to Evaluate the Positive or Negative Nature of the Economic Impacts

One of the critiques of many socioeconomic approaches to gambling is that they fail to adequately consider important economic principles in judging the overall impacts (Walker 2003a, 2008a, 2008d; Walker & Barnett, 1999). For example, several costs of gambling in the Anieski & Braatan (2008) framework (e.g., theft, unemployment, costs of treating problem gamblers) are unlikely to result in any real reduction in the economic wealth within a society/jurisdiction (i.e., just transfers of wealth within society) (Eadington, 2003; Walker, 2003, 2008a; Walker & Barnett, 1999). There is no doubt that theft and treatment for problem gamblers are important negative impacts that need to be identified and well documented. However, the point being made is that these types of impacts have relatively little influence on the overall economic vitality/wealth of a jurisdiction.

Rather, for something to have a meaningful economic/monetary impact one of the following needs to be present:

1. *The economic activity causes either an influx of money/assets from outside the jurisdiction or a loss of money/assets to an outside jurisdiction.* For gambling, an influx occurs when the primary patronage base is from outside the jurisdiction, or capital investments are made in the community by outside agencies (e.g., casino developer, private businesses, government).
2. *The economic activity increases or decreases the value of existing assets.* This impact generally does not apply to gambling, or to entertainment industries more generally, as



gambling primarily involves a transfer of wealth rather than a creation of wealth<sup>6</sup>. However, it can occur when the introduction of a new gambling venue either increases or decreases the market value of neighbouring property. It can also occur in the manufacture of gambling equipment (e.g., electronic gambling machines) that can be sold for an amount worth more than the sum of its parts.

3. *The economic activity produces increased or decreased utilization of existing money.* Money that sits dormant has very little economic utility to the broader economy. It has much greater utility if it is spent on gambling, this gambling revenue is then spent on employee wages, and these wages are then used to buy local goods and services. In general, money has increased economic value as a function of the number of people that use the money and the speed of the cash flow from one person to the next (Walker, 1999, 2007). Increased utilization of existing money is more likely to occur if gambling patronage comes from individuals who are not financing their gambling by reducing their spending on other activities (i.e., the income class of the patronage potentially speaks to this). Evidence of increased utilization of existing money is seen if the increased revenues and employment in the gambling industry (and supporting/complementary industries) occurs without there being offsetting declines in the revenues and employment in other industries. There is good evidence that adding a new and interesting service/good to the economy (e.g., gambling) can at least temporarily create increased monetary flow without negative impacts on other businesses (Walker & Jackson, 1998; 2007).
4. *The transfer of wealth and changed monetary flow caused by the new economic activity strengthens or weakens sectors of the economy capable of producing an influx/outflow of wealth, increased/decreased value of existing assets, or increased/decreased utilization of money.* One of the potential concerns with gambling is that it may redirect money from wealth-producing sectors (i.e., private business) to sectors not known for wealth creation (i.e., government, charity).
5. *The failure to implement the economic activity would have resulted in an influx/outflow of wealth, increased/decreased value of existing assets, or increased/decreased utilization of money.* Even if there is not a clear economic gain, an economic benefit still exists if the gambling activity prevented assets or money from leaving the jurisdiction, prevented a decrease in the value of existing assets, or prevented decreased utilization of existing money.

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<sup>6</sup> Wealth creation is more typical of manufacturing industries. For example, a car manufacturing industry creates wealth by making things that are worth more than the sum of their constituent parts. Most entertainment industries, in contrast, simply redirect monetary flow from one sector of the economy to another.

## Recognize that Assessing the Overall Positive or Negative Nature of the Observed Impacts is a Qualitative Assessment that often Involves some Subjectivity

The judgement about whether the overall impacts of gambling are positive or negative (and the degree to which they are positive or negative), requires a joint qualitative assessment of a) the profile of social impacts, and b) the judged overall positive or negative economic value of the economic impacts. When these things are in alignment, then this assessment is straightforward (i.e., mostly positive social impacts and positive economic value; mostly negative social impacts and negative/no economic value).

However, the assessment is inherently subjective when these things are not in alignment (e.g., net economic gains but mostly negative social impacts). In this situation, the overall assessment will depend on the importance one assigns to the economic versus social impacts. In particular, whether one believes that the net economic value of the activity adequately offsets any negative social impacts.<sup>7</sup>

One potential way of reducing the individual subjectivity of this determination is simply to present the results and let the reader decide whether he/she considers the positives to outweigh the negatives. Another solution is to present the profile of results to a representative group of individuals from the jurisdiction and seek their opinion about whether they judge the overall impacts to be positive or negative.

## Identify How Much Money is Involved, Where it is Coming From, and Where it is Going

*The principles listed up to this point have been focused primarily on resolving the central methodological issue of how to handle the social impacts of gambling. The following principles are focused more on some of the practical issues involved in conducting socioeconomic analyses of gambling and ensuring optimal scientific rigour.*

Gambling is an economic activity characterized by a transfer of wealth. There are groups and sectors that are winners and there are groups and sectors that are losers, and *most of the impacts are seen in these groups/sectors*. Thus, the first step in a socioeconomic analysis of gambling is to document a) how much money is being transferred (a rough gauge of the magnitude of the potential impacts); b) where the money is coming from; and c) where the money is going. The demographic characteristics of the gamblers are particularly important, with the most important socioeconomic variables being age, gender, ethnicity, income, and problem gambling status. The geographic origin of the gamblers is also very important because it speaks to a) whether the revenue is an infusion of new wealth or just local money that has

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<sup>7</sup> Other areas of subjectivity also exist; for example, how some of the ambiguous impact categories are construed (e.g., is increased government revenue a positive or negative thing). Another example concerns whether you consider the micro (community-level) benefits more important than the macro (regional-level) benefits.

been redirected, and b) the geographic range in which to expect (and therefore, measure) impacts.

Next, it is important to clearly document which groups/sectors are the primary recipients of gambling revenue (i.e., private operator, different levels of government, charity, local community) as well as the geographic location of each of these groups. It is also essential to document how these groups then disburse or spend the money so as to identify all the downstream beneficiaries. The geographic origin of the operating expenses to run the new type of gambling, as well as the origin of any equipment purchased are also relevant to a socioeconomic accounting. (Note: if gambling revenues are primarily collected at the state or federal level (rather than at the municipal level) and are redistributed provincially or federally, then there is a good chance that there will be a net outflow of money from the local municipality hosting the gambling venue).<sup>8</sup>

### **Establish both the Micro and Macro Geographic Impacts**

Most socioeconomic impact studies have only focused on the changes in the community that received the new form of gambling. However, for a full understanding of the impacts, it is necessary to go beyond these boundaries, as financial inflow/benefits in one region usually come at the expense of financial outflow or loss of benefits in adjoining regions. Thus, one should aspire to assess both the micro (community specific) impacts and the macro (greater regional) impacts. As mentioned, the geographic origin of the patronage is a good indication of the regional scope of the impacts. Once the boundary of this larger region/jurisdiction is established, it is important to clearly identify the impacts within the community of interest as well as regionally.

### **Compare Changes to those Observed in Control Communities/Regions**

It is important to be able to disentangle the unique influence of gambling on observed socioeconomic changes (Walker, 2008c, 2008d). Most socioeconomic impact studies simply examine the pre- and post-changes in a community after the introduction of a new gambling venue/format. However, there are a multitude of economic and social forces at work that account for social/economic changes in a community. Furthermore, gambling often represents only a small fraction of total economic activity within a community.

Similarly, many of the adverse effects of problem gambling cannot be uniquely attributed to the introduction of a single new gambling venue/activity, as most problem gamblers engage in a wide variety of gambling activities and also have comorbid conditions that contribute to their constellation of problems (e.g., substance abuse, mental health problems) (Australia Productivity Commission, 1999; Crockford & el-Guebaly, 1998; Lorains, Cowlshaw, & Thomas,

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<sup>8</sup> Some jurisdictions compensate for this by providing municipalities with a guaranteed fixed percentage of the profits.

2011; Walker, 2008d).<sup>9</sup>

A much stronger methodology is a matched control comparison where changes in the region receiving the new form of gambling are compared against changes in an economically, socially, and demographically similar region that did not receive this new form of gambling. This approach does not eliminate the contributing role of comorbidities to people's problems, but it does show the unique impact that the introduction of legalized gambling has in exacerbating these problems. This approach has some of its own complications, however, as there may be baseline attitudinal differences in regions that opt to have the new form of gambling versus communities that have opted not to have it. Also, the control region must be far enough away so as not to be secondarily impacted by the introduction of the new form of gambling. This geographic separation makes it more difficult in finding a region that is a good match.

### **Speculate on What the Situation would have been Without the Introduction of the New Form of Gambling**

Most studies compare economic and social indicators after the introduction of gambling to what these indicators were before the introduction of gambling. However, often the justification for the introduction of a new form of gambling is the desire to stem the outflow of gambling dollars to neighbouring jurisdictions that already offer this new form of gambling. Thus, an even more relevant comparison than 'baseline', is what the likely economic and social situation would have been if gambling had not been introduced (i.e., the 'counterfactual situation') (Walker, 2008c). The extent to which the introduction of domestic gambling opportunities has prevented losses to neighbouring jurisdictions is very difficult to judge, but nonetheless merits speculation.

### **Use Longitudinal Designs when Possible**

Most impact studies collect yearly statistical 'snapshots' of a community's socioeconomic indicators. Attempts are then made to attribute any changes to the introduction of the new gambling activity (e.g., a problem gambling increase after one year being responsible for a corresponding bankruptcy rate increase after one year). However, two data points provide no information concerning whether problem gambling caused the bankruptcies, the bankruptcies caused the problem gambling, or whether they were independent events. Even if one event precedes the other (e.g., problem gambling increase in year 1 followed by bankruptcy increase in year 2), causal attributions are weak unless it can be established that increased bankruptcies occurred primarily within the problem gamblers.

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<sup>9</sup> The latest research shows that the conditions having the high comorbidity to problem and pathological gambling are: nicotine dependence (60.1%), substance use disorder (57.5%), mood disorder (37.9%), and anxiety disorders (37.4%) (Lorains, Cowlishaw, & Thomas, 2011).

A related problem with cross-sectional designs is that there is no way of knowing the exact meaning of a stable prevalence rates from Time 1 to Time 2. For example, although severe levels of problem gambling appear to be reasonably stable over time (e.g., Slutske, 2006; Williams, Hann, Schopflocher et al., 2011), less severe forms (which are much more common) are not. A couple of studies have found that the large majority of moderate problem gamblers are no longer problem gamblers at 1-year follow up (Wiebe et al., 2003) or 7-year follow up (Abbott et al., 1999). Thus, stable rates of problem/pathological gambling from Time 1 to Time 2 imply the existence of a large group of newly affected individuals roughly equivalent to the number of individuals who have recovered or remitted (meaning that gambling is producing a cumulatively wider impact on the general population than would have otherwise been known). The ability to make causal attributions within individuals and establish problem gambling *incidence* (i.e., rate of new cases) is strengthened with use of a longitudinal design that documents the temporal sequence of events in 'real time' within individuals.

### Assess Impacts for Years Before and for Years After the Introduction of New Gambling Venues/Opportunities

The length of time it takes for all economic and social impacts of gambling to manifest themselves is unknown. Some of the economic impacts (e.g., revenues, employment, etc.) appear to be fairly immediate. On the other hand, it may take a few years for competing industries to fail or for increased utilization of roads, sewers, etc. to result in repairs. Some economic impacts will also reverse themselves in a resilient economy as industry repositions itself. Social impacts may take longer to appear than economic impacts. While some individuals experience rapid onset of gambling problems, others gamble safely for several years before problems develop (Committee on the Social and Economic Impact of Pathological Gambling, 1999). There is also evidence that rates of gambling and problem gambling may decline with extended exposure (LaPlante & Shaffer, 2007; Shaffer, LaBrie & LaPlante, 2004). It is also very important to realize that new gambling opportunities are always added to existing gambling opportunities (even if they are illegal). Thus, lag effects of these pre-existing opportunities can easily be mistaken for immediate impacts of the new forms. It is important to document prior gambling opportunities and socioeconomic effects for several years before as well as for several years after the introduction of a new form of gambling.

## Report the Limitations and Parameters of these Results

The final principle is to clearly recognize and report that the results obtained are very much a function of the context in which the study was conducted. More specifically:

### Impacts are Dependent on the Magnitude of the Change in Gambling that has Occurred for the Population

Adding a large casino to a small community without prior gambling opportunities will usually have a much larger impact than adding an additional casino to a large city that already has existing casinos and other gambling opportunities.

### Impacts are Somewhat Specific to the Type of Gambling Studied

Different types of gambling have different profiles of impacts in terms of their potential for contributing to problem gambling (e.g., EGMs vs. lotteries), the number of jobs they produce (horse racing vs. EGMs), and their likelihood of cannibalization of other industries, etc. Hence, it is necessary to qualify results as being specific to the type of gambling studied.

### Impacts are Somewhat Specific to the Jurisdiction Studied

Jurisdictions differ widely in how gambling revenue is distributed, pre-existing availability of gambling, the strength of policy and educational initiatives to prevent problem gambling, baseline levels of poverty and unemployment, and the vulnerability of the population to addiction. Hence, it is important to recognize that the results will be somewhat dependent on the conditions that exist in the particular jurisdiction being studied.

### Impacts are Somewhat Specific to the Time Period Studied

The time period that impacts are studied is critical, as gambling availability and gambling policy can change rapidly within a jurisdiction. Furthermore, there is evidence that populations with extended exposure to gambling may have different rates of problems compared to places with more recent introduction of gambling (LaPlante & Shaffer, 2007; Shaffer et al. 2004). Hence, it is also important to qualify results as being specific to the time period studied.

## THE SOCIAL AND ECONOMIC IMPACTS OF GAMBLING

The second purpose of this paper is to provide an exhaustive review of what is known about the social and economic impacts of gambling in light of the methodological considerations that have been identified.

### Article Identification

The first step in this goal involved identifying all studies reporting on the social or economic impacts of gambling from both the academic and non-academic 'grey' literature. The following keywords and subject terms were used in various combinations to locate resources for this review of the literature:

gambling / gaming / gambler\* / betting / wagering  
 casino\* / lotter\* / vlts / video lottery / egm\* / gaming machines / slot machines / racino / bingo  
 / horse racing / internet gambling / online gambling  
 impact\* / effect\* / socioeconomic / cost\* / benefit\* / cost-benefit / economic impact / social  
 impact / introduction

Searches were performed in the following academic databases:

- ProQuest databases (e.g., ABI/INFORM Global, Digital Dissertations, etc.)
- EBSCO databases (e.g., Academic Search Complete, Business Source Complete, etc.)
- OVID databases (e.g., PsycINFO, PsycARTICLES, MEDLINE, etc.)
- Gale databases (e.g., Psychology Collection, etc.)
- Sociological Abstracts
- ScienceDirect
- Wiley InterScience
- JSTOR

Searches were performed using the following online search tools and repositories:

- [Google Scholar](#)
- [Alberta Gambling Research Institute Repository](#)
- [Responsible Gambling Council Online Library](#)
- [New Zealand Problem Gambling Online Library Catalogue](#)
- [Australasian Gaming Council Research eLibrary](#)
- [University of Lethbridge Library Catalogue](#)

### Inclusionary Criteria

- Any study that examined the direct or indirect social and/or economic impacts of any form of gambling.

### Exclusionary Criteria

- Routine prevalence studies whose primary purpose was to establish the current prevalence of gambling and problem gambling in a jurisdiction.
- Annual government or industry reports.

### Article Categorization

Studies identified in the literature were categorized so that findings could be compared and synthesized. Main categorizations involved identifying which studies were reporting empirical findings versus only discussing theoretical issues; which empirical studies were of higher or lower quality; the type(s) of gambling examined in the study; the time period of the investigation; the jurisdiction where the study was conducted; and the results of the investigation in terms of type of impact(s) observed and the direction or nature of impacts. The specific categorization scheme used was as follows:

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Study Number    | <b>1 to 492.</b> Studies are listed alphabetically by author.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Full Reference  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Abstract        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Type of Study   | <b>Original Research</b><br><b>Secondary Analysis</b> (review or analysis of existing evidence)<br><b>Scoping Studies</b> (studies estimating potential future impacts of a new form of gambling)<br><b>Methodological Issues</b><br><b>Currently Underway</b> (no published findings yet available)                                                                                                                                                                                                                                                                                                                                                         |
| Study Quality   | Studies were rated as <b>Good Quality</b> or <b>Excellent Quality</b> if they had several of the following features: <ul style="list-style-type: none"> <li>• Pre- and Post- comparisons</li> <li>• Control groups/regions</li> <li>• Having both a Micro and Macro geographic scope</li> <li>• Examining impacts over a long time period</li> <li>• Examining multiple economic and social measures simultaneously</li> <li>• Collection of original data versus exclusive reliance on secondary sources</li> <li>• Employing a large sample size</li> </ul> Note: Studies rated as good or excellent received a bolded study number in the Summary Tables. |
| Gambling Format | Studies were categorized in terms of which form(s) of gambling were the focus of the investigation: <ul style="list-style-type: none"> <li>• <b>Multiple Forms</b> (defined as studying the impacts of 2 or more forms)</li> <li>• <b>Casinos</b></li> <li>• <b>Electronic Gambling Machines (EGMs)</b></li> <li>• <b>Lotteries</b></li> <li>• <b>Internet Gambling</b></li> </ul>                                                                                                                                                                                                                                                                           |



|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | <ul style="list-style-type: none"> <li>• <b>Horse Racing</b></li> </ul> <p>Note: There were no studies that looked exclusively at bingo, sports betting, raffles, casino table games, or social gambling, and only one study that looked exclusively at instant win tickets.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Location               | Jurisdiction(s) and/or geographic area(s) that were the focus of the analysis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Years Impacts Examined | The time period that was the focus of the analysis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Areas Impacted         | <p><u>ECONOMIC IMPACTS (i.e., primarily monetary consequences)</u></p> <p><b>Government Revenue</b><br/> <b>Public Services</b><br/> <b>Regulatory Impacts</b><br/> <b>Infrastructure Value</b><br/> <b>Infrastructure Costs</b><br/> <b>Business Starts and Failures</b><br/> <b>Business Revenue</b><br/> <b>Personal Income</b><br/> <b>Property Values</b></p> <p><u>SOCIAL IMPACTS (i.e., primarily nonmonetary consequences)</u></p> <p><b>Problem Gambling &amp; Related Indices</b><br/> <b>Crime</b><br/> <b>Employment</b><br/> <b>Socioeconomic Inequality</b><br/> <b>Leisure Activity</b><br/> <b>Attitudes</b><br/> <b>Quality of Life/Public Health/Social Capital/Values</b></p> <p>When an impact was found in an area, a descriptor was also used to indicate whether the study found an <b>increase, decrease, no impact, or changes but no net increase or decrease</b> in that area (in the latter case either because increases in some areas were offset by decreases in other areas or because 'increase' or 'decrease' is not an appropriate descriptor for the change that has occurred).</p> |

## GENERAL STUDY CHARACTERISTICS

There are several general findings that characterize this literature and that provide important context to the pattern of findings described later.

First, there is a surprisingly large number of studies ( $N = 492$ ). This is partly due to the considerable research interest in the socioeconomic impacts of gambling. However, it is also due to the inclusive nature of this review that included any study that “examined the direct or indirect effects of gambling”. A good portion of these studies ( $N = 199$ ) are not empirical investigations, but rather, are concerned with methodological issues in assessing impacts, the potential impacts of future forms of gambling (‘scoping studies’), or secondary reviews of existing literature. Of the remaining 293 ‘Empirical Studies’, many investigated issues relevant to impacts (e.g., correlates of gambling and/or problem gambling) but were not necessarily intended to be controlled empirical investigations. Consequently, only a minority include methodological elements necessary to more unambiguously attribute the correlates or observed changes to the introduction of gambling (i.e., pre- and post- comparisons; control groups/regions; having both a micro and macro geographic scope; examining impacts over an extended time period; large sample sizes). Furthermore, many studies had a very limited scope in that their focus was just on one particular impact of gambling (e.g., property values or bankruptcies), and thus were unable to speak to the range of other impacts that potentially existed.

Overall, in terms of their ability to shed light on the impacts of gambling, only 7 empirical studies in this review were rated as excellent and 44 as good. An additional contributing factor to the small number of high quality studies is that about half of these 293 studies are consultancy reports rather than academic journal articles. However, this is characteristic of the field of gambling studies more generally. Rhys Stevens, the Librarian and Information Specialist for the Alberta Gaming Research Institute, estimates that at least two-thirds of all the research literature in gambling consists of government reports/commissions/inquiries and industry studies. This ‘grey literature’ is sometimes not as scholarly because it is often conducted by non-academics, it is less likely to receive the scrutiny of peer-review, and it is more likely to be funded by an entity with a vested interest in certain results<sup>10</sup>. However, publishing in peer-reviewed academic journals also provides no guarantee of quality due to the proliferation of lower quality journals with high acceptance rates, the esoteric focus of some of these academic investigations, and because page constraints on academic journal articles precludes comprehensive and detailed reports. All 7 studies rated as ‘excellent’ in the present review were, in fact, lengthy consultancy reports published for non-academic purposes.

An encouraging note is that there has been an increase in methodological quality over time, with most of the better quality empirical studies having been conducted in recent years. This

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<sup>10</sup> Examples of this are the studies funded by the Canadian Gaming Association (#202) and the American Gaming Association (#32) that only report positive economic impacts (i.e., ignoring social costs and negative economic impacts).

reflects a much greater (but unstated) consensus on the need to adhere to many of the principles listed in Part I of this report.

Another general finding is that most of the studies in this review have been published in the past 10 years. More specifically, as seen in Figure 1, only 1% of studies were published prior to 1990, 29% between 1990 and 1999, and 70% were published from 2000 to the present time.

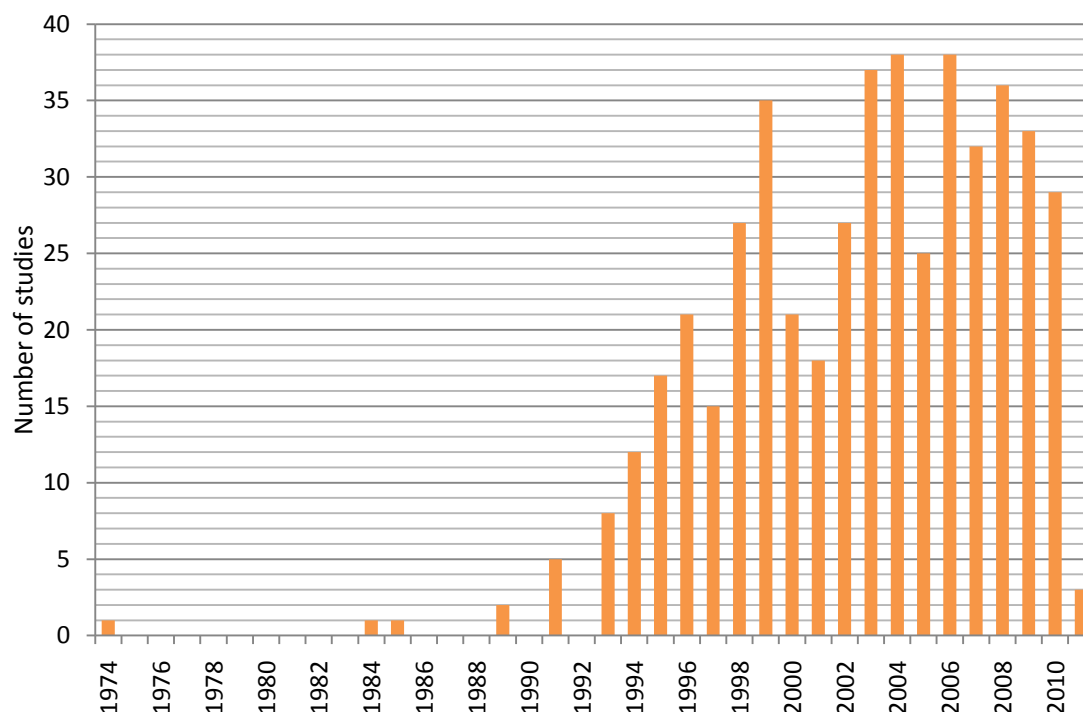


Figure 1. Publication Year of all Socioeconomic Studies.

However, the publication date of these studies does not accurately convey the actual time frame of the empirical investigations themselves. Indeed, as seen in Figure 2, the most common time period where impacts have been examined has been the 1990s (55% of studies). Thirty five percent of the empirical investigations examined impacts in the period 2000 to the present time and another 10% of studies examined impacts prior to 1990.<sup>11</sup> This is an important consideration because impacts are somewhat specific to the time period studied, due to significant changes in gambling availability and gambling policy over different time periods. Furthermore, the ‘adaptation hypothesis’ (LaPlante & Shaffer, 2007; Shaffer et al., 2004) contends that the negative social effects of gambling are maximal when gambling is first introduced and tends to diminish with time.

<sup>11</sup> In cases where the study period occurred over multiple years the middle year was chosen for Figure 2

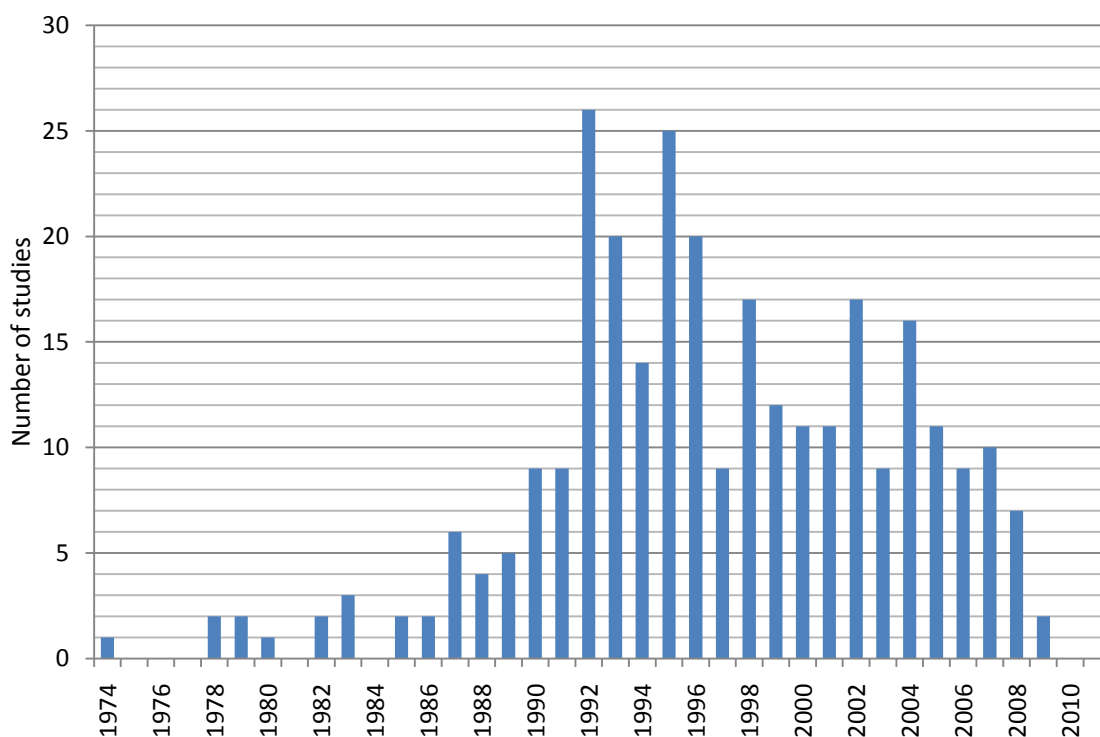


Figure 2. Time Period in which Socioeconomic Impacts of Gambling have been Examined (Empirical Studies).

An equally important factor is the location where these empirical studies have taken place. Figure 3 illustrates that the large majority of the investigations were conducted in North America. More specifically, 62% were conducted in the United States, 16% in Canada, 8% in Australia, 4% in New Zealand, and 10% in other countries (South Korea = 6 studies, Worldwide = 4, United Kingdom = 3, China = 3, Slovenia = 2, South Africa = 2, Taiwan = 2, Austria = 1, Germany = 1, Hong Kong = 1, Switzerland = 1, Malaysia = 1). This North American focus is important to bear in mind when evaluating the pattern of research findings, as jurisdictions differ in their availability of gambling, revenue distribution models, strength of policy and educational initiatives to prevent problem gambling, baseline unemployment rates, and so on. All of these factors mediate impacts.

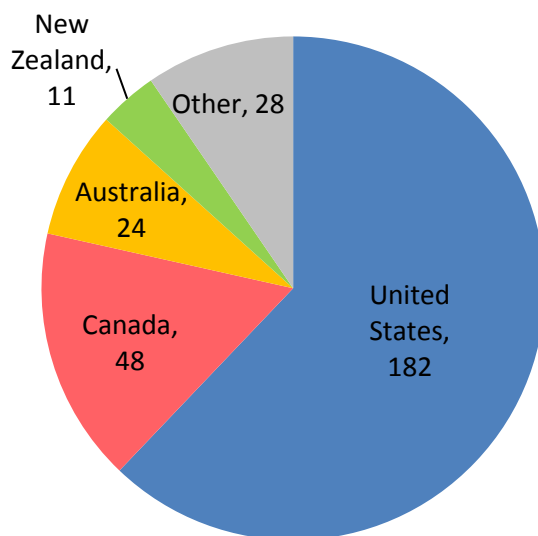


Figure 3. Location of Empirical Socioeconomic Impact Studies of Gambling.

Figure 4 illustrates that the socioeconomic impacts of different forms of gambling have not been studied to an equal extent. Rather, the large majority of empirical studies have focused on the impact of casinos. The next two most commonly studied were the impact of multiple forms of gambling (25.7% of studies) and the impact of electronic gambling machines (EGMs) (10.1% of studies). There were no empirical investigations that looked exclusively at bingo, sports betting, raffles, casino table games, or social gambling, and only one study that looked exclusively at instant win tickets.

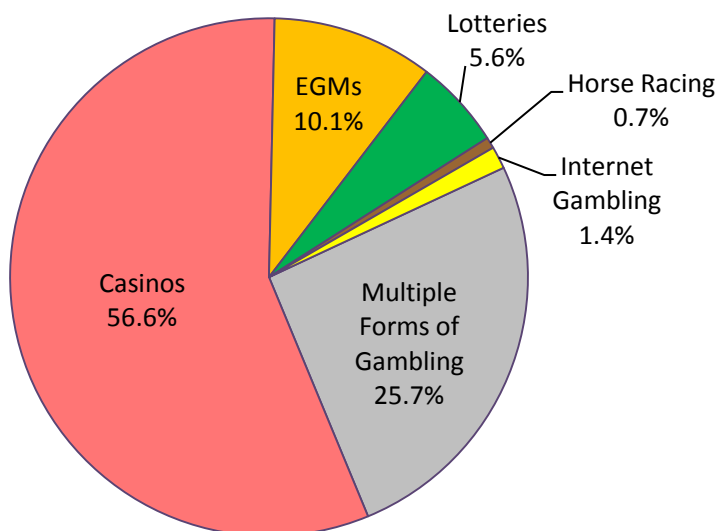


Figure 4. Type of Gambling that has been the Focus of Empirical Socioeconomic Impact Studies.

Additionally, Figure 5 illustrates that impact areas have also not been investigated to an equal degree. Economic impacts are illustrated in green and social impacts in orange. The most commonly examined impact areas have been: government revenue (27% of studies), employment (27%), problem gambling and related indices (24%, primarily bankruptcy and changes in problem gambling prevalence), business revenue (23%), crime (16%), public services (15%), and attitudes (12%). Fewer than 10% of studies examined impacts related to either quality of life, infrastructure value, socioeconomic inequality, property values, personal income, leisure activity, business starts and failures, infrastructure costs, or regulatory costs.

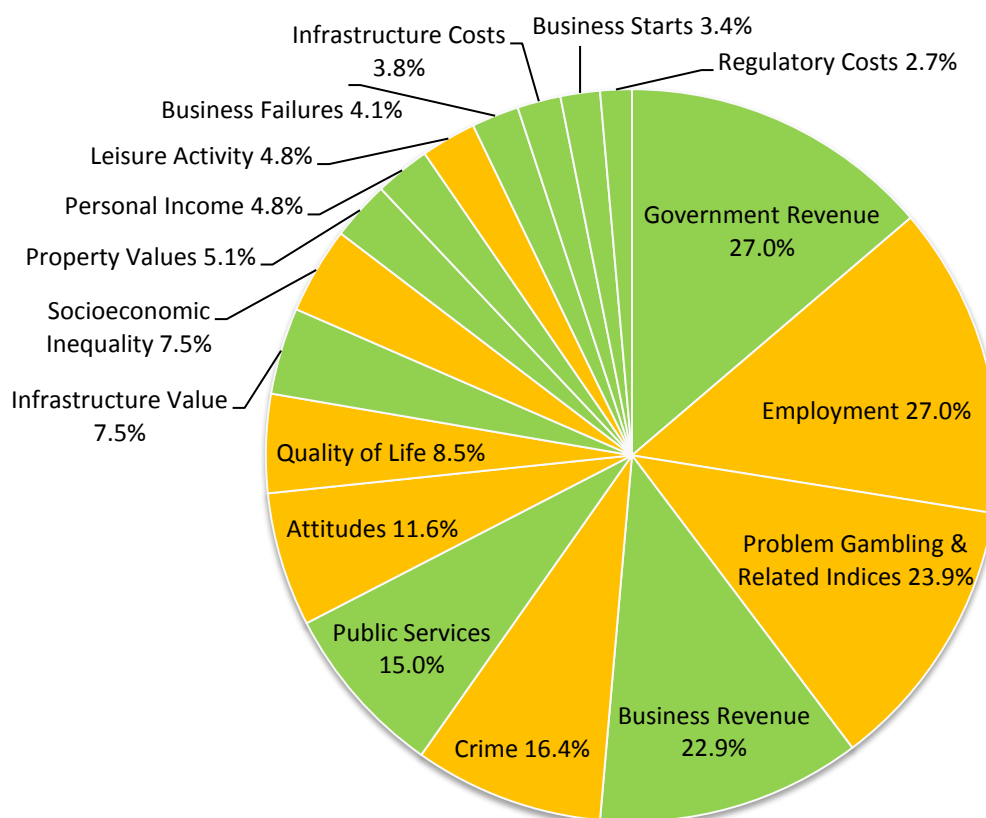


Figure 5. Impact Areas Examined in the Empirical Socioeconomic Impact Studies.

The next section documents the main pattern of findings concerning the economic and social impacts of gambling. There are separate tables for the type of gambling investigated: Multiple Forms; Casinos; Electronic Gambling Machines; Lotteries; Internet Gambling; and Horse Racing. Rows within each of these 6 tables provide a listing of the various Economic Impacts (top half of table) and Social Impacts (bottom half of table). Columns indicate whether there was an increase, decrease, change (but no net increase or decrease), or no impact. The numbers in each cell identify an individual study (as listed in the Appendix), with high quality studies (i.e., rated good or excellent) bolded.

## SUMMARY TABLES OF IMPACTS

| <b>MULTIPLE FORMS OF GAMBLING (2 or more)</b>       | <b>Increase</b>                                                                                                                                                                      | <b>Changes (but no net increase or decrease)</b>                                                            | <b>No Impact</b>                         | <b>Decrease</b>             |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------|
| Government Revenue                                  | 7, 28, <b>53</b> , 58, 61, 105, 106, 107, 132, 142, 151, <b>275</b> , 319, 371, <b>373</b> , <b>398</b> , <b>401</b> , 402, 417, 436, <b>439</b> , 449, <b>463</b> , 464, <b>483</b> | 125, 383, 460                                                                                               |                                          |                             |
| Public Services                                     | 1, 2, 7, 48, 49, <b>53</b> , 61, 99, 202, 319, <b>325</b> , 371, 402, <b>463</b> , 464, <b>483</b>                                                                                   | <b>401</b>                                                                                                  |                                          |                             |
| Regulatory Costs                                    | 7, <b>373</b> , <b>401</b> , <b>483</b>                                                                                                                                              |                                                                                                             |                                          |                             |
| Infrastructure Value                                | 2, <b>53</b> , 61, 202, 371, <b>401</b> , 402, <b>418</b> , <b>483</b>                                                                                                               |                                                                                                             |                                          |                             |
| Infrastructure Costs                                | 61                                                                                                                                                                                   |                                                                                                             |                                          |                             |
| Business Starts                                     |                                                                                                                                                                                      |                                                                                                             | 106, <b>483</b>                          |                             |
| Business Failures                                   | <b>401</b>                                                                                                                                                                           |                                                                                                             | <b>53</b> , 106, <b>483</b>              |                             |
| Business Revenue                                    | 2, 7, <b>53</b> , 58, 340, 417, 444, 449, 458, 459                                                                                                                                   | <b>33</b> , 123, 264, <b>273</b> , <b>275</b> , <b>325</b> , 371, <b>398</b> , <b>439</b> , 459, <b>463</b> | 28, <b>398</b> , <b>483</b>              | 315                         |
| Personal Income                                     | 28, <b>418</b>                                                                                                                                                                       |                                                                                                             |                                          |                             |
| Property Values                                     |                                                                                                                                                                                      |                                                                                                             | <b>53</b> , <b>483</b>                   |                             |
| Problem Gambling & Related Indices                  | 1, 2, <b>53</b> , 61, 99, 187, 261, <b>275</b> , <b>325</b> , 337, 360, 381, <b>398</b> , <b>401</b> , 427, <b>439</b> , 465, <b>483</b>                                             |                                                                                                             | <b>53</b> , 422, <b>463</b> , <b>483</b> |                             |
| Crime                                               | 35, 61, 76, 87, 244, <b>390</b> , <b>398</b> , <b>401</b> , <b>463</b> , <b>483</b>                                                                                                  | 50, 393                                                                                                     | 2, <b>53</b> , 87, 340, 464              | 464                         |
| Employment                                          | 1, 2, 58, 61, 99, 106, 202, <b>275</b> , 319, <b>325</b> , 371, <b>373</b> , <b>401</b> , 402, 417, <b>418</b> , <b>439</b> , <b>483</b>                                             | <b>33</b> , 313                                                                                             | <b>53</b> , <b>398</b>                   |                             |
| Socioeconomic Inequality                            | <b>273</b> , 414, <b>463</b> , 464, 483, 485                                                                                                                                         |                                                                                                             | 145                                      |                             |
| Leisure Activity                                    | 1, 7, 8, <b>398</b> , 436, <b>483</b>                                                                                                                                                | 2, <b>33</b>                                                                                                |                                          |                             |
| Attitudes                                           |                                                                                                                                                                                      |                                                                                                             |                                          | <b>53</b> , 360, <b>483</b> |
| Quality of Life/Public Health/Social Capital/Values | 48, 402                                                                                                                                                                              |                                                                                                             |                                          | 76, <b>401</b> , <b>483</b> |

| CASINOS                                             | Increase                                                                                                                                                                                                                                                              | Changes (but no net increase or decrease) | No Impact                                                                                      | Decrease                            |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------|
| Government Revenue                                  | 8, 32, 52, 63, 64, 70, 78, 89, 110, <b>133</b> , 147, <b>149</b> , 207, 209, 214, 220, <b>245</b> , 250, 267, 268, 278, 306, 308, <b>351</b> , 364, 376, 389, 403, 408, <b>409</b> , 419, 435, 440                                                                    | 24, <b>200</b> , 420                      | 45                                                                                             | 25, 352                             |
| Public Services                                     | 8, 22, 32, 52, 64, 78, <b>94</b> , 110, <b>131</b> , <b>133</b> , <b>245</b> , 250, 267, 317, 425, 435                                                                                                                                                                |                                           | 205                                                                                            | 206                                 |
| Regulatory Costs                                    | 8, <b>351</b>                                                                                                                                                                                                                                                         |                                           |                                                                                                |                                     |
| Infrastructure Value                                | 8, 22, 32, 52, 62, 110, <b>133</b> , 188, 278, 396, 468                                                                                                                                                                                                               |                                           |                                                                                                |                                     |
| Infrastructure Costs                                | 8, 32, 52, 110, 206, 220, <b>245</b> , 408                                                                                                                                                                                                                            |                                           | 45, <b>149</b>                                                                                 |                                     |
| Business Starts                                     | 32, <b>133</b> , <b>139</b> , 194, 207                                                                                                                                                                                                                                | 220                                       |                                                                                                |                                     |
| Business Failures                                   | 8, 32, <b>139</b> , 408                                                                                                                                                                                                                                               | 52, 220, 408                              |                                                                                                | 166                                 |
| Business Revenue                                    | 22, 32, 64, 71, 83, <b>97</b> , 110, <b>133</b> , 188, 194, <b>245</b> , 250, 308, 389, 396, 419, 425, 440                                                                                                                                                            | 25, 62, 182, 209, 220, <b>316</b>         | <b>149</b> , 207, <b>409</b> , 457                                                             | 8, 52, <b>200</b> , 357, 382        |
| Personal Income                                     | 27, 70, <b>94</b> , 161, 188, 233, 282, 419, 431                                                                                                                                                                                                                      |                                           | 467, 468                                                                                       | 306                                 |
| Property Values                                     | 8, 45, 52, 220, <b>409</b> , 480                                                                                                                                                                                                                                      |                                           | <b>149</b> , <b>344</b> , 361, 467, 468                                                        | 161                                 |
| Problem Gambling & Related Indices                  | 9, 41, 45, 54, 82, <b>131</b> , 154, 166, <b>167</b> , 215, <b>216</b> , <b>289</b> , 308, 323, 343, <b>351</b> , 369, 396, <b>407</b> , 425, 430, 466                                                                                                                |                                           | 54, 55, 77, 103, <b>168</b> , 215, <b>240</b> , <b>289</b> , <b>316</b> , 322, 377             |                                     |
| Crime                                               | 52, <b>98</b> , 102, <b>131</b> , 146, 156, <b>179</b> , 189, 220, 349, 396, <b>407</b> , 410, 419, 431                                                                                                                                                               | 17, <b>362</b>                            | 8, 19, 45, 102, 232, <b>240</b> , <b>245</b> , 288, <b>316</b> , <b>344</b> , <b>405</b> , 487 | 354                                 |
| Employment                                          | 8, 22, 32, 52, 64, 70, 71, 78, 83, <b>94</b> , <b>97</b> , 110, <b>131</b> , <b>133</b> , 138, <b>139</b> , <b>149</b> , <b>152</b> , <b>153</b> , 161, 188, 194, 209, 233, <b>245</b> , 267, 278, 292, 306, 308, <b>316</b> , 324, 364, 396, 419, 431, 440, 467, 468 | 200                                       | 45, 62, 173, 181, 182, <b>240</b> , 282, 361, 468                                              |                                     |
| Socioeconomic Inequality                            |                                                                                                                                                                                                                                                                       |                                           |                                                                                                |                                     |
| Leisure Activity                                    | 78, <b>351</b>                                                                                                                                                                                                                                                        | 52, 389                                   |                                                                                                |                                     |
| Attitudes                                           | 19, 20, 29, 79, 159, 217, 258, 320, 324, 368, <b>407</b>                                                                                                                                                                                                              | 224, 255, 257, 268, 269, 311              | 67, 210, 406                                                                                   | 82, 207, 211, <b>216</b> , 369, 442 |
| Quality of Life/Public Health/Social Capital/Values | <b>94</b> , 110, <b>131</b> , 271, 303, 324, 431                                                                                                                                                                                                                      | <b>133</b> , 138, 336, 376                | 205, 208, 321, 354, 467                                                                        | 184, 311                            |



| <b>ELECTRONIC GAMBLING MACHINES (EGMs)</b>          | <b>Increase</b>                                               | <b>Changes (but no net increase or decrease)</b> | <b>No Impact</b>  | <b>Decrease</b>                |
|-----------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------|-------------------|--------------------------------|
| Government Revenue                                  | 6, <b>34</b> , 113, 310, 353, 428                             |                                                  |                   |                                |
| Public Services                                     | 6, 10, 227, 310, 399                                          |                                                  |                   |                                |
| Regulatory Costs                                    | 428                                                           |                                                  |                   |                                |
| Infrastructure Value                                | <b>34</b>                                                     |                                                  |                   |                                |
| Infrastructure Costs                                |                                                               |                                                  |                   |                                |
| Business Starts                                     |                                                               |                                                  | <b>34</b>         |                                |
| Business Failures                                   |                                                               |                                                  | <b>34</b>         |                                |
| Business Revenue                                    |                                                               | 280, 314, <b>345</b>                             |                   | 57, 113, <b>327</b> , 346, 399 |
| Personal Income                                     |                                                               |                                                  |                   |                                |
| Property Values                                     |                                                               |                                                  | 462               |                                |
| Problem Gambling & Related Indices                  | <b>4</b> , 10, 13, <b>34</b> , 65, 227, 314, <b>327</b> , 411 |                                                  | 6, <b>14</b> , 66 |                                |
| Crime                                               | <b>462</b> , 476                                              |                                                  | 14                |                                |
| Employment                                          | 6, <b>34</b> , <b>314</b>                                     | 327                                              | 280, 310          | 346                            |
| Socioeconomic Inequality                            | 113, 281, 399, 475, 486                                       |                                                  | 57                |                                |
| Leisure Activity                                    | 399                                                           | 6                                                |                   |                                |
| Attitudes                                           | 34                                                            |                                                  |                   | 280, 310, <b>327</b>           |
| Quality of Life/Public Health/Social Capital/Values |                                                               |                                                  | <b>462</b>        | <b>265</b> , <b>462</b>        |

| LOTTERIES                          | Increase                                | Changes (but no net increase or decrease) | No Impact | Decrease   |
|------------------------------------|-----------------------------------------|-------------------------------------------|-----------|------------|
| Government Revenue                 | 5, 108, 290, 477                        |                                           |           |            |
| Public Services                    | 5, 290, 331, 477                        |                                           | 331       |            |
| Business Revenue                   |                                         |                                           |           | <b>228</b> |
| Problem Gambling & Related Indices | 66, 251                                 |                                           | 251       |            |
| Employment                         | 290                                     |                                           |           |            |
| Socioeconomic Inequality           | 5, 47, 51, 144, 145, 158, 290, 348, 478 |                                           |           |            |
| Attitudes                          | 290                                     |                                           |           |            |

| INTERNET GAMBLING                  | Increase  | Changes (but no net increase or decrease) | No Impact           | Decrease |
|------------------------------------|-----------|-------------------------------------------|---------------------|----------|
| Government Revenue                 | <b>21</b> |                                           |                     |          |
| Regulatory Costs                   | <b>21</b> |                                           |                     |          |
| Infrastructure Investment          | <b>21</b> |                                           |                     |          |
| Business Revenue                   |           | <b>21</b>                                 |                     |          |
| Problem Gambling & Related Indices | 172, 488  |                                           | <b>21, 252, 488</b> |          |

| HORSE RACING                       | Increase | Changes (but no net increase or decrease) | No Impact | Decrease |
|------------------------------------|----------|-------------------------------------------|-----------|----------|
| Government Revenue                 | 104      |                                           |           |          |
| Business Revenue                   | 104      |                                           |           |          |
| Problem Gambling & Related Indices | 54       |                                           |           |          |
| Employment                         | 104      |                                           |           |          |

## IMPACTS AS A FUNCTION OF ECONOMIC AND SOCIAL DOMAIN

The following section provides a textual description of the pattern of findings illustrated in the Summary Tables. Greater emphasis was given to studies with better methodological quality.

### ECONOMIC IMPACTS

#### Government Revenue

Governments earn revenue from gambling in several ways. The first way, which is a common method in European countries and by state governments in the United States and Australia, is through the taxation of gambling venues/operations. In most countries these taxation rates tend to be much higher than exist for other industries (Clotfelter, 2005). The second way in which governments earn gambling revenue is to become directly involved in the provision of gambling and directly receive its revenue. Government agencies in many jurisdictions directly provide lotteries and receive the revenue. Governments in some countries (e.g., Canadian provincial governments) also directly provide other forms of gambling such as electronic gambling machines, sports betting, and Internet gambling. Many countries (especially in Europe) have similar arrangements whereby government controlled arms-length monopolies deliver various forms of gambling. Finally, governments in some countries (e.g., United States) earn gambling revenue by taxation of gambling winnings by consumers, although this constitutes a very small revenue source.

Thus, it is a very consistent finding across all forms of gambling that the introduction of gambling is associated with increased government revenue.

There are a few important caveats to this finding. One is that the introduction of one form of gambling can sometimes negatively impact the revenue of other forms. If both forms of gambling contribute to government revenue then there can be situations where the game source of government revenue has changed, or the amount for different levels of government has changed, but there is no overall net increase in revenue (24, 125, 200, 383, 420). There are also situations where government revenue can decrease if the newly introduced form contributes less to government revenue (e.g., Indian casinos) than the forms that are negatively impacted (e.g., state lotteries) (25, 284, 460), or if the profits of a form that does not contribute significantly to government revenue negatively impacts jurisdictional personal income or business revenue that is subject to government taxation (25, 352, 420). In cases where most gambling revenue goes to the state or federal government there can be losses to local municipal governments if they do not receive equivalent value back in the form of state or federal services (e.g., 149, 277, 428).

Future research in this area would benefit by examining longer term effects of gambling on government revenue, and incorporating all impacts on all aspects of governmental budgets (Mauskopf et al., 2007; Trueman et al., 2001).

## Public Services

Governments exist to serve their people, and so it is a natural expectation that the increased government revenue derived from gambling would be used for the enhancement of public services (e.g., health, education, social security). Indeed, these 'public benefits' are often touted by governments as the main justification for the introduction or expansion of gambling. In addition, in many jurisdictions certain forms of gambling (typically raffles and bingo) are delivered by charitable/community organizations and/or gambling revenues are earmarked for these groups, the revenues of which are then used for the benefit of the local community.

Not surprisingly then, the evidence from the Summary Tables indicates that gambling revenue usually improves public services provided by government and/or charity/community groups.

However, it is also sometimes the case that government gambling revenue is used to avoid raising taxes, reduce government debt, or to maintain rather than enhance existing services (205). It is also the case that new forms of government and/or privately delivered gambling (e.g., casinos) can negatively impact 'public services' by their direct competition with and negative impact on traditional charitable gambling revenue (401). Finally, increased demand for public services from individuals negatively impacted by problem gambling can decrease overall quality of services (206).

## Regulatory Costs

Government typically provide the regulatory oversight over gambling operations. Thus, with expanded gambling comes expanded costs associated with ensuring that gambling operates according to regulation. These administrative/regulatory costs are increased in jurisdictions where the government is also directly involved in the commercial provision of gambling.

There are only 7 studies that have examined regulatory impacts, all of which have found regulatory costs associated with the introduction or expansion of gambling (7, 8, 351, 373, 401, 428, 482). At the same time, it needs to be noted that government gambling revenue almost always outweighs these regulatory costs.

## Infrastructure Value

In the present context 'infrastructure' also refers to physical assets such as buildings. The construction of a new gambling venue (e.g., casino) adds to the physical assets and wealth of the local community. This is especially true if this new venue is associated with infrastructure upgrades (e.g., roads, electrical, sewage) to accommodate the new facility, and if the new building and infrastructure upgrades are financed by out-of-jurisdiction investors. Increased infrastructure value can also occur when a new gambling venue stimulates the construction of complementary businesses (e.g., hotels, restaurants) to take advantage of the increased patronage of the area.

All studies that have examined this issue have documented an increase in infrastructure value. This increase is to be expected primarily for types of gambling that involve the construction of new venues (casinos, horse race tracks, bingo halls) as opposed to things such as Internet gambling or adding EGMs to bars. However, there are cases where the introduction of EGMs has spurred significant facility improvements to accommodate the new machines (34). A final consideration is that the magnitude of the increase in infrastructure value will be a function of how well developed the existing infrastructure is, with larger gains occurring in impoverished areas (e.g., Aboriginal reserves; 22, 133, 188, 396, 418).

## Infrastructure Costs

Physical infrastructure upgrades for new gambling venues are occasionally financed in part or wholly by government rather than by a private developer. In these cases investment is construed as more of a 'cost', although this cost will be offset by the increased value/assets of these infrastructure upgrades to the community. However, *service* upgrades that are needed (police, fire services, public transportation) do not increase the physical assets of the community and the costs of these enhanced services are commonly borne by government. Furthermore, the *maintenance* of physical infrastructure (e.g., roads, utilities, sewage) is also usually a government responsibility, and a new gambling venue puts added stress on this physical infrastructure because of the increased patronage of the area. Here again, infrastructure costs might be anticipated more for forms of gambling involving the construction of major new venues. They are of little significance to formats such as Internet gambling or EGMs.

All 9 studies that have looked at infrastructure costs have focused on casinos. All but 2 of these studies (45, 149) have found evidence of some infrastructure costs. It is also important to note, however, that several of these studies also found there to be increased infrastructure value that has tended to offset infrastructure costs (8, 32, 52, 61, 110).

## Business Starts, Business Failures, and Business Revenue

There are several possibilities concerning the potential impact of gambling on other industries. Many casinos offer hotels, restaurants, and entertainment in addition to their traditional gambling activities. These associated amenities could potentially compete with similar businesses in the local area. On the other hand, it is possible that local hotels, restaurants and entertainment venues might benefit from the 'overflow' and/or in situations where the casino does not offer these associated amenities.<sup>12</sup> Another argument is that the discretionary consumer spending is limited and that increased gambling expenditure necessarily reduces expenditure on other goods/businesses. A counter-argument is that adding a new and interesting service/good to the economy could increase overall consumer expenditure at the expense of savings. Finally, it is also possible that increased utilization of existing money could increase overall business revenue (and GDP) with no negative impact on other industries (445). This occurs if gambling revenue is re-circulated within the local economy at a more rapid rate than revenue from other industries.

Not surprisingly, then, the evidence is mixed on the impact of gambling on other businesses. The positive or negative nature of the impact is dependent on several factors:

Positive impacts on other businesses have been most commonly reported with 'destination casinos' that draw their patronage from outside the immediate area (i.e., bringing in a true influx of wealth), require overnight stays, and are located in tourist areas offering other entertainment and sightseeing opportunities (2, 64, 71, 110, 250, 308, 389, 396, 425, 440). Specific sectors that benefit most consistently are hotels, restaurants, lounges, and other types of entertainment (97, 104, 133, 139, 188, 194, 245, 275, 280, 314, 316, 345, 439).<sup>13</sup> These positive local impacts are especially enhanced when the number of visitors is large relative to the population of the local area, when baseline levels of economic activity are low (e.g., Aboriginal communities) (e.g., 110, 396), when casino supplies are purchased locally (7, 417)<sup>14</sup>; and when employee wages are spent in the local area (22, 417).

However, most of these studies have focused on the benefits of casino gambling to local businesses without examining whether there is offsetting loss of business revenue in the regions/jurisdictions from which the visitors/tourists originated. A larger geographic focus is

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<sup>12</sup> This is known as a 'multiplier effect'. Some studies have assumed multipliers to exist with the introduction of gambling that are equivalent to the multiplier effects that occur with other industries (e.g., 250). However, the present review of report makes it clear that it is a mistake to automatically make this assumption.

<sup>13</sup> There have also been investigations reporting an increase in the number of pawn brokers (327).

<sup>14</sup> The purchase of materials and supplies is typically neglected in socioeconomic impact studies. Gambling establishments spend significant amounts of money on food, liquor, entertainment, furniture and gambling supplies. Gambling machines themselves cost tens of thousands of dollars each and are typically replaced every few years. Supplies that are purchased locally are beneficial to the local economy. Supplies that are purchased outside the jurisdiction result in a net outflow of money.

necessary to address the more important question of whether gambling can spur economic growth in the absence of substitution/cannibalization. Several studies have examined this issue on a larger geographic scale and *have* reported gambling introduction to increase overall business revenue on a state-wide level (444, 449, 458). However, the most recent and thorough analysis of these findings is that if this stimulating effect exists, it only lasts a few years (457).

A number of studies have found that the introduction of gambling has no significant impact (either positive or negative) on other industries (28, 106, 149, 398, 409, 483). In some cases (398, 483) this lack of impact is attributed to the fact that gambling constituted too small a part of the jurisdictional economy to have significant jurisdiction-wide impacts.

A slight majority of studies, including a majority of the better quality studies, have found that the introduction of gambling has either simply created changes in the pattern of business starts/failures/revenue or a negative impact on other businesses that is offset by the revenue gains in the new form of gambling. Negative impacts on other business have been reported most commonly in studies where gambling patronage is derived locally. This scenario applies to EGMs that are introduced into bars/lounges (47, 113, 327, 346, 399)<sup>15</sup>, lotteries (228), and non-destination type casinos (e.g., 52, 220, 440). The type of business that is most commonly reported to be negatively impacted is other forms of gambling, with the most common pattern being recently introduced forms (i.e., casino gambling, Internet gambling) accelerating the decline of older forms (e.g., horse racing, dog racing, bingo, lotteries) (21, 123, 309, 383, 401, 459, 463).<sup>16</sup> In the case of horse racing, a common response to the competition from casinos has been for the industry to introduce electronic gambling machines at tracks, which has been beneficial financially, but has not necessarily stemmed the decline in horse race betting (58, 123, 164, 340). Other than gambling, there is no other business sector that appears to be consistently singled out for negative impacts, although there is perhaps a somewhat greater likelihood of negative impacts being reported in recreational/amusement sectors (275, 382, 439). Rather, a very wide range of retail businesses have reported negative impacts as a result of gambling introduction (8, 25, 33, 52, 62, 182, 200, 209, 220, 264, 273, 315, 325, 371, 408).

To be clear, this type of displacement or cannibalization is not necessarily a bad thing. A normal feature of a dynamic economy is responsiveness to the changing desires of consumers. A shift from less to more valued goods and services can contribute to economic growth as

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<sup>15</sup> EGMs can have other beneficial effects to the hosting venue (e.g., alcohol sales; 280, 314, 345).

<sup>16</sup> It is a common belief that recently introduced forms of gambling have a direct negative impact on existing traditional forms of gambling. However, this belief is largely based on declining participation and revenue in older forms coinciding with increased participation and revenue with new forms. While there is no doubt some degree of causal connection between these events, it is important to recognize that the decline in most of these traditional forms began prior to the widespread introduction of the newer forms and the magnitude of these declines have almost been as great in jurisdictions with less availability of the newer forms. Also, the fact that per capita gambling expenditure has increased significantly in the past 30 years (in inflation-adjusted dollars) argues against the notion that people have a fixed amount to spend and are opting to finance expenditures on new forms by using the money they would have spent on older forms.

resources flow to their highest-valued uses (449). Economic development occurs if the new activity stimulates additional monetary flow in the economy or results in something being created which is of greater value than what is replaced (e.g., higher profits, higher wages, higher property values). This is one of the issues with the introduction of slot machines to horse race tracks as a primary 'impact' has been to prop up an industry that would otherwise falter.

The lack of a net economic gain can still be beneficial if the introduction of gambling retains gambling revenue that would have otherwise left the jurisdiction. There is plenty of empirical evidence that gamblers divert their patronage to a new gambling venue in their local area that is closer than the older *equivalent* venue. More generally, when two products are of equal value and interest the consumer will consistently choose the one that is closer and more convenient. However, certain types of gambling (particularly casino gambling) can vary considerably in their size, amenities, and attractiveness. Furthermore, legalization and greater consumer exposure to a product tends to increase patronage of that product. Thus, the few studies that have examined the evidence have found that the creation of domestic casinos (in North American jurisdictions) has actually been associated with *increased* travel to Nevada to gamble (214, 483) or had no impact on retaining dollars that continued to go to Nevada (53). More generally, Nevada experienced one of its greatest periods of gambling expansion coincident with the creation of domestic casinos in many states and provinces in the 1990s and early 2000s.<sup>17</sup> A similar issue exists with Internet gambling, in that the 2,000 'off-shore' sites are all equally convenient (and better established) than any newly created domestic Internet site (488). Consequently, creation of domestic Internet gambling opportunities primarily has the effect of significantly increasing the number of people that engage in Internet gambling with apparently only a modest capture of the revenue (488).<sup>18</sup> The net effect is that there is likely more revenue leaving the jurisdiction than prior to the introduction of legalized domestic Internet gambling.

In summary, the introduction of gambling often has benefits on other non-gambling businesses when it is able to attract revenue from outside the local area. This is particularly true when the number of visitors is large relative to the local population, when the area was previously economically impoverished, when visitation requires overnight stays, and when part of the new revenue (e.g., wages, supplies) is also spent in the local area. Hospitality services tend to be the

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<sup>17</sup> There are 2 mechanisms for this effect. One is that in a competitive industry whenever a competitor introduces something that could potentially divert your customer base, the natural tendency (which occurred in Nevada) is to enhance your product to continue to make it attractive. The other explanation is that domestic casinos contribute to a 'culture' of gambling, increasing the likelihood that casino players will want to go to the major casino destinations in addition to their locally available ones.

<sup>18</sup> The increase in Internet gambling participation has been much greater in countries where it has been legalized compared to countries that have not legalized it (488). Worldwide, the current jurisdictional prevalence of Internet gambling closely parallels its legal availability, with the highest rates occurring in jurisdictions where it is legal (e.g., U.K., Sweden, where it is about 11%), and much lower rates in countries where it is primarily illegal (e.g., U.S., Canada, where it is about 2 – 4%) (488). The degree of revenue capture has not been studied thoroughly, but in the U.K. it is estimated to be only 25% (Political Editor, 2011).



industry sector that experiences the most economic benefits. When the patronage base is from the local area it is much less likely there will be beneficial impacts on other local businesses. However, regardless of patron origin, benefits to gambling venues, gambling-related businesses, or any geographic area usually occurs at the expense of other geographic areas and/or business sectors. The caveat to this general finding is that there may be some potential for gambling to increase overall economic activity in its first few years of introduction without negative impacts on other industry.

## Personal Income

Changes in average personal income are another indirect indicator of the positive or negative economic impacts of gambling. Income changes could occur because gambling brings in new money, acts as an economic stimulus, replaces existing jobs with lower wage jobs, or interferes with economic growth.

Relatively few studies have looked at this variable. Several studies have documented an increase in personal income and a decrease in poverty rates in Native American communities in the United States hosting a new casino (27, 94, 161, 188, 233, 282, 418). In some cases these income increases have also occurred in nearby non-Native communities (419, 431).

In general, when there is significantly increased revenue into a community there will often be widespread economic benefits, including an increase in personal income (70). The distribution and disposition of gambling revenues in the respective sites will serve to mediate this variable. Here again, however, this monetary influx is presumably offset by monetary outflows from other regions. Studies that have looked at personal income on a wider geographic basis have not found there to be significant changes subsequent to gambling introduction (306, 467, 468).

## Property Values

Gambling venues potentially add or detract from the wealth of the community by increasing or decreasing the intrinsic value of neighbouring property. A new gambling venue may also increase the value of adjacent property to investors who may desire to build complementary businesses (e.g., hotels, restaurants). However, a new gambling venue might also increase noise, traffic, and parking difficulties and/or attract undesirable clientele to the neighbourhood. Changes in property values will also impact the amount of property taxes collected by municipal governments. Increased property values are economically beneficial but may have negative social consequences for low-income local homeowners and those living in rental accommodations.

A total of 7 studies (and the majority of the better quality studies) have not found any impact of new casinos on property values (53, 149, 344, 361, 467, 468, 483), whereas 6 studies have found them to be associated with increases in property values (8, 45, 52, 220, 409, 480). Only

one study found property values near a casino to decrease (161). There has only been one study looked at this issue for EGMs, and found no relationship between EGM density and property prices (462).

Factors that appear to mediate whether there is a positive or neutral effect concern the property value of the area before the introduction of a casino (with impoverished areas more likely to experience property value gains), and zoning regulations which may restrict casinos to areas less sensitive to price changes (e.g., industrial areas).

## SOCIAL IMPACTS

### Problem Gambling

One of the main negative impacts of gambling is problem gambling. Depending on the country, the year, and the assessment instrument, the past year population prevalence of problem gambling ranges from 0.4% to 7.5% (Alberta Gaming Research Institute, 2011). There are both monetary and social/nonmonetary costs associated with problem gambling. The monetary costs include money spent on a) treatment and prevention; b) policing, prosecution, incarceration, and probation for gambling-related crime; c) child welfare involvement for gambling-related family problems; and d) unemployment and welfare payments and lost productivity because of gambling-related work problems. However, because only the minority of problem gamblers seek or receive treatment, and only a minority typically have police/child welfare/employment involvement, the bulk of the impacts tend to be social/nonmonetary in nature. The social impacts include things such as mental health problems, suicide, family/relationship problems, divorce, and the potential for intergenerational modelling of excessive gambling.

Many of the studies in the present review have documented significant monetary costs associated with problem gamblers (7, 353, 363, 373, 397, 425, 426, 427, 429, 436) and significant levels of problem gambling within a population (e.g., 399, 436). However, the real question concerns the extent to which the increased legal availability of gambling is responsible for this, as *problem gambling existed to some extent prior to its legal availability, and the common comorbidities of problem gamblers (i.e., mental health problems, other addictions) are partly responsible for these associated social problems*. Thus, in order for a study to be reported in the Table of Impacts, it must have examined how problem gambling had changed in relation to a *variation* in gambling availability.

It is important to recognize that a controlled before-after comparison of changes in rates of problem gambling and related indices coincident with the introduction of a new form of gambling will reliably identify the unique impact (attributable fraction) that this new form of gambling has on increasing these rates. In epidemiology, the attributable fraction (AF) approach (Walter, 1976; 1980) has been used to identify the proportion of disease that is

caused by certain risk factors (Ezzati et al., 2002) and the extent to which consuming alcohol, tobacco, or illegal drugs has on things such as mortality or hospitalizations (Rehm et al., 2002). The AF approach is very useful but assumes that causal effects of risk factors are stable over time and across jurisdictions. Thus, consumption of 1 drink of alcohol has been found to increase the risk of breast cancer by about 7% in many studies in different countries and at different times (Rehm et al., 2010). This is no surprise, as it is based on a biochemical mechanism (Baan et al., 2007). However, for gambling, this attributable fraction will vary quite considerably between jurisdictions depending on the type of gambling introduced, the length of time people have previously been exposed to gambling, and many other factors. Thus, this precludes the development of a standard AF for gambling that could be universally applied (i.e., the AF for gambling will be somewhat unique for each jurisdiction and time period).<sup>19</sup>

Overall, the majority of these latter studies reported that an increase in the availability of gambling was associated with an increase in problem gambling rates. This is true for a) multiple forms of gambling (2, 53, 61, 99, 187, 325, 337, 360, 381, 398, 427, 465, 483; not 53, 463, 483); b) casinos (9, 215, 216, 351, 369, 425, 430, 466; not 55, 103, 168, 215, 377); and c) EGMs (4, 10, 13, 34, 227, 314, 327, 411; not 6, 14). The evidence for Internet gambling was mixed with some studies reporting increases (172, 488) and some studies reporting no impact (21, 252, 488).

Many other studies have not directly examined the overall rates of problem gambling, but rather, changes in indices that are related to problem gambling, such as number of people receiving treatment, bankruptcies, suicides, divorces, and child neglect.

The number of people presenting to treatment for problem gambling increased in the 3 studies that examined and specifically reported on this (1, 261, 401). For suicides, there were 3 studies that reported the introduction of multiple forms of gambling was associated with an increase in suicides (289, 343, 407) and there were 3 studies reporting no impact on suicide rates (77, 289, 322). Another study found an increase in the rate of suicides following the introduction of lotteries (66), but not EGMs (66). Only 2 studies examined divorces, one of which found mixed results (439) and another study finding no impacts (322).

Bankruptcies have been studied more than any other index of problem gambling, with the large majority of studies finding that bankruptcy increased following the introduction of casinos (41, 45, 54, 82, 131, 154, 166, 167, 308, 323, 396, 407; but not 43, 240, 316) and/or multiple forms of gambling (275, 439, 483; but not 422). Surprisingly, the specific relationship between EGM introduction and bankruptcy does not appear to have been investigated. One study of horse racing found an increase in bankruptcies (54). One study of lotteries found mixed results (251). The relatively strong relationship between bankruptcies and gambling availability (compared to

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<sup>19</sup> It is important to recognize that the attributable fraction that is determined for each jurisdiction does not identify the extent to which a person's associated mental health and substance abuse comorbidities has made him or her vulnerable to problem gambling, and therefore susceptible to the impacts of this greater legal availability of gambling. However, by the same token, it must be recognized that problem gambling has likely made people more susceptible to these associated comorbidities.

some of these other indices) makes theoretical sense, considering that financial difficulties are typically the most common problem reported by problem gamblers (e.g., 483)<sup>20</sup>.

The general finding that increases in gambling availability tend to be associated with increases in rates of problem gambling is not surprising, and is in line with the well established association between adverse consequences and the increased availability of alcohol, tobacco and prescription opioids (Anderson & Hughes, 2000; Babor, Caetano et al., 2010; Fischer et al., 2010) and illegal drugs (Babor, Caulkins et al., 2010).

However, this positive association obscures an important sub-pattern to these results, which is that increases in problem gambling and related indices are most likely to be reported after the initial introduction of gambling, and less likely to be reported with extended exposure. The studies that did not find increased gambling availability to be related to increased problem gambling or related indices tended to be conducted at later time periods than studies that did find an impact. More specifically, the median evaluation period for the studies reporting an increase in problem gambling, bankruptcy, and suicide were during the 1980s and 1990s versus the 2000s for studies that did not find an impact. One of the few longitudinal studies in this review (215) specifically found a one year effect that had subsequently disappeared after both 2 year and 4 year intervals. Other studies in this review found increases in problem gambling subsequent to casino introduction only occurred in regions without prior access to a casino, with no impact in regions where casinos were already available (e.g., 53).

More generally, the above pattern is consistent with the general stabilization (and/or decrease) of problem gambling prevalence rates that have occurred in many western jurisdictions in the last decade (AGRI, 2011). It is also consistent with the 'adaptation' hypothesis (LaPlante & Shaffer, 2007; Shaffer et al., 2004) which states that most harms associated with gambling occur after it is first introduced because the population has little experience/knowledge about the product, and its novelty encourages high rates of participation. However, with time, participation rates go down because the novelty has worn off, and the population's familiarity with the product (and potentially adverse experience) helps inoculate them from further harm. This corresponds to experiences in the alcohol field, where increases in availability did not lead to increases in alcohol related harm when the market was already saturated (Room et al., 2009). While it seems very plausible that saturation/adaptation occurs for gambling, there are many unanswered questions concerning the exact mechanism by which it operates, the time course, the magnitude of gambling availability required, and whether there are differences for different types of gambling. Some research on these issues has been completed by Abbott (4), who indicated that the relationship between availability and prevalence broke down at between 6 to 10 EGMs per 1,000 adults. A more recent analysis of this issue examining EGM density in New Zealand and Australia confirmed that although some adaptation occurs with extended exposure, it can be offset by increased availability. In other words, increased

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<sup>20</sup> The only other type of problem that tends to be reported as commonly as financial problems is mental health problems. However, mental health problems arguably have a less immediate and direct connection to suicide than does financial problems and bankruptcy.

availability leading to increased problem gambling and extended exposure leading to increased inoculation are independent forces (411).

## Crime

Theoretically, the introduction of legal gambling should influence crime rates in one of several ways. One way is by decreasing the rate of illegal gambling. This has a fairly reliable effect (393, 464, 483), although it is somewhat dependent on whether illegal forms can still offer some form of competitive advantage (393). Another way is by increasing the number of problem gamblers, a percentage of which will commit crimes to support their gambling<sup>21</sup> (primarily 'property' crimes that have the potential of raising additional revenue) (374). A third is because certain forms of gambling offer increased opportunities for illegal activity to occur (i.e., passing counterfeit money, money laundering, loan-sharking, cheating-at-play, race fixing, theft, fraud) (Barthe & Stitt, 2007). A fourth is by creating venues (i.e., casinos) that serve alcohol and thereby potentially contribute to alcohol-related offences (i.e., assault, driving under the influence) and/or disproportionately attract a clientele with criminal tendencies. A fifth and final way is by increasing the overall number of visitors to the area (with this population often not being taken into account when determining a jurisdiction's crime rate per capita).

Empirically, the evidence is somewhat mixed concerning the impact that legal gambling introduction has on crime rates. Certainly the most common finding is that crime rates do indeed increase with increased gambling availability, a result obtained in the majority of the better quality studies as well. The main caveat to studies with this finding is that some of them are not referring to aggregate crime rates. Rather, some are focusing on the impacts for certain types of crime, such as increased fatal alcohol-related traffic accidents following the introduction of casinos (98). Other studies are simply documenting that increased gambling at an individual level is associated with increased likelihood of committing gambling-related crime (35, 76, 87, 476), or that a substantial percentage of fraud in Australia and New Zealand is attributable to gambling (244). Another study documented that the rate of criminally inadmissible persons attempting to enter Canada from the United States increased subsequent to a Canadian casino opening (349).

Most other studies reporting increases in crime *are* reporting on overall crime rates. A minor caveat to these studies is that they may not have fully factored in the decrease in illegal gambling charges, as this decrease can occur many years before the introduction of legal forms. For example, in Alberta, Canada the most dramatic reduction in illegal gambling occurred between 1965 and 1977 (91% decrease), which was several years prior to the introduction of legalized casinos, EGMs, and sports betting (483). This is reflective of a less vigilant attitude

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<sup>21</sup> Roughly 7% of problem gamblers in a representative provincial sample in Alberta, Canada reported engaging in illegal activity to support their gambling (483).

toward enforcing the law prior to actual legalization.<sup>22</sup> However, it is also true that illegal gambling charges usually only constitute a very small percentage of overall crime statistics in most jurisdictions, so that even if these decreased rates are fully taken into account, there would still be overall aggregate increases observed.

Another important caveat is that only a couple of studies reported a general increase in all categories of crime (e.g., 146). Rather, consistent with the notion that increases in crime are partly attributable to increased numbers of problem gamblers, most studies have found increases primarily in property offences, particularly fraud, embezzlement, theft, and larceny (50, 131, 189, 244, 401, 419, 431, 463) (although two studies actually found reductions in these categories: 17, 362). Consistent with the notion that casinos may facilitate alcohol-related offences, 2 studies have found increased rates of driving while intoxicated (DUIs) (98, 401), and several studies have specifically found casino introduction to be associated with increases in violent crime such as assault (131, 189, 410, 431) (although one study (50) found a reduction). Finally, consistent with the notion that increased visitor populations contribute to increased crime rates, several studies specifically determined this to be the primary factor underlying increased crime (61, 396, 410, 463).

However, there are also many studies that have found gambling introduction to have no impact on crime. In some cases, this was a more circumscribed finding such as lotto or casino players were no more likely to commit crime (87), or that the introduction of lotteries and off-track betting did not have an impact on the volume of illegal gambling (464), or that there is no evidence of a significant amount of money laundering in casinos (232).

However, several other studies involved comprehensive and well conducted analyses and still failed to find increased crime rates, or only found increases in some communities but not others (e.g., 53, 240, 245, 316, 344, 405). Thus, it seems clear that although there are good theoretical reasons to expect a positive relationship between gambling introduction and crime, it may not always manifest itself. There are many other factors that can potentially mediate this relationship, such as extensive prior exposure to gambling (e.g., 53), a relatively small increase in the availability of gambling relative to population size, a temporal lag whereby crime increases take several years to occur (179), or the existence of jurisdictional policies that protect against the negative impacts of gambling (e.g., effective programs to prevent problem gambling, limits on the provision of readily available cheap alcohol in venues, enhanced security/policing in casinos, etc.). Because the magnitude of the increase in crime is not large in most studies (e.g., 8% in 179, 10% in 131 and 431), the presence of any of these other moderating factors has potential to negate the increased crime effect.

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<sup>22</sup> Although Alberta has had continuing decreases in illegal gambling incidents since 1977, the baseline levels are already quite low and the decreases have been much more gradual.

## Employment

A large number of studies have looked at potential employment gains as a result of gambling introduction. Overwhelmingly, these studies found increased employment.

This result is somewhat surprising considering the previously described mixed impact of gambling introduction on business revenue and business starts (i.e., it is hard to imagine net employment gains in the absence of increased business revenue or business starts). This is due to the circumscribed scope of most of the studies, in that they have only examined employment changes in the local region where the new gambling venue is located and/or did not examine the potential loss of employment in other economic sectors (e.g., 1, 2, 6, 8, 22, 32, 52, 64, 94, 99, 110, 131, 133, 138, 139, 152, 153, 161, 188, 194, 202, 209, 233, 267, 275, 292, 306, 308, 324, 396, 431, 467, 468).

There is no doubt that there is often significant gambling-related employment associated with the introduction of a new form of gambling. Also, as mentioned in the business impacts section, there is no doubt that any business that attracts visitors and an influx of new money to the local region has potential to generate broad spin-off benefits to other business sectors. This is particularly true for the hospitality industry, when the visitations require overnight stays, when the population of the area is small relative to the influx of visitors, and when the area is economically depressed. Hence, it is not surprising that the clearest employment gains are reported for Indian casinos (22, 94, 99, 110, 131, 138, 161, 233, 324, 402, 417, 431, 467, 468), casinos in other impoverished areas (133, 396), the hospitality industry (139, 194), and in jurisdictions that attract gamblers for overnight stays (61, 70, 106, 373, 439).

The only factor that mitigates against local employment benefits in these circumstances is when the employees are not from the local area. In most cases, it would appear that the majority of gambling employees are recruited locally, although this is not necessarily true for senior administrative positions (Lafferty & McMillen, 1989), and for staff at aboriginal Nations casinos. When staffing is not local and these employees spend their wages outside the region, then both the local employment and revenue benefits of this new form of gambling can be fairly minimal.

However, an equally important question that needs to be addressed is whether there are still net employment gains when factoring in potential employment losses to other geographic areas and business sectors. Although a few studies with this larger scope have still found employment gains (149), most have not (e.g., 33, 45, 53, 62, 200, 240, 313, 398). Thus, it seems reasonable to assume that the same results for business revenue also apply to employment. That is, that employment increases in gambling venues, gambling-related businesses, or any geographic area will usually occur at the expense of other geographic areas and/or business sectors, although there may be some potential for a new industry such as gambling to stimulate monetary flow and increase overall economic activity (and thereby overall employment) in its first few years of introduction.

There are a couple of important caveats to this more general conclusion. One concerns the fact that most gambling industry employment is typically low skilled and low paid (Marshall, 2001). Thus, if these new jobs displace better paid positions in other industries, then the employment impacts would be more negative than neutral. This may not be a significant concern, as the few studies that have looked at this issue (e.g., 483) have found that the large majority of new gambling employees tend to come from similarly low-skilled and low wage sectors.

A second and more important caveat is that there are different employment impacts as a function of *type* of gambling. The majority of research on employment has focused on the impact of casinos, rather than other forms of gambling. Although casinos employ a considerable number of people, it may well be less labour intensive than some of the forms it is replacing. For example, a horse race track not only employs people in the racing sector but also indirectly supports farmers who grow horse feed, as well as the many people employed in breeding and raising horses (most of whom will usually be located in the same jurisdiction as the race track) (58, 104, 123).<sup>23</sup> At the other end of the continuum, automated forms of gambling such as EGMs are the least labour intensive form of gambling, unless the machines are also built in the same area/jurisdiction, which is generally not the case. Thus, EGM displacement of revenue from other economic sectors has the potential of actually *decreasing* overall employment levels, a claim made by at least one study (346). Further to this point, the EGM Table of Impacts has the lowest ratio of studies reporting employment increases relative to studies reporting either decreases, changes, and/or no impacts. Of course, even if this is true, the overall employment impact of EGMs will depend on what is then done with the EGM revenues (i.e., whether it is used for other ventures in the same jurisdiction that require employment).

### Socioeconomic Inequality

An important social issue concerns whether gambling acts as a form of regressive taxation, where poorer people contribute disproportionately more to gambling revenue than people with higher incomes. A total of 22 studies have examined this issue, with all but two finding that gambling was indeed economically regressive.

One of the two studies that failed to find that gambling produced greater socioeconomic inequality was not looking at gambling expenditure as a function of income, but rather whether the introduction of non-lottery forms of gambling had an impact on increasing the variability of employment income within a jurisdiction (which it did not) (145). The other study used a relatively small sample of people recruited in Brisbane, Australia and focused more on the prevalence of EGM gambling as a function of income group rather than average expenditure as a function of income group (57).

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<sup>23</sup> This is one of the arguments used to support the introduction of slot machines to racetracks. Although EGMs create few new jobs, they stave off significant job loss in the horse racing industry (58, 123).



Although it is clear that lower income people contribute proportionally more of their income to gambling than do middle and high income groups, it is important to recognize that in most of these studies average annual expenditure on gambling still tends to increase as a function of income class. Thus, total gambling revenue is still primarily contributed by middle and higher income groups.<sup>24</sup> It is also important to recognize that *Internet* gambling has not been studied to any great extent. The existing research indicates that Internet gambling is less likely to be regressive, as computer fluent Internet gamblers tend to be better educated and have higher incomes than gamblers who do not gamble on the Internet (488).

## Leisure Activity

One of the important positive impacts of gambling is that it provides entertainment value and an additional leisure option for the population. Furthermore, the fact that the majority of people in Western countries participate in some form of gambling and that gambling revenue is in the billions of dollars in many jurisdictions provides evidence of its value to society. This positive impact of gambling is fairly self evident, which is perhaps why relatively few studies have examined it in detail.

However, closer scrutiny of the leisure benefit of gambling is required. The first thing to realize is that gambling is of primary value to a fairly small segment of the population. The purchase of lottery tickets is actually the only type of gambling that the majority of the population participates in, with casino gambling, sports betting, and all other forms of gambling being much less common<sup>25</sup>. Furthermore, when surveyed, it is usually only a small percentage of people who typically report that gambling is a “very important” leisure activity for them or that it has replaced other leisure activities (e.g., 0.9% and 2.6% respectively in Alberta in 2008; 483). Finally, although billions are spent on gambling, the majority of gambling revenue tends to come from a small percentage of the population. This is self evident in the fact that most jurisdictional gambling revenue comes from EGMs, and only a minority of the population in any jurisdiction plays EGMs. A more detailed analysis of reported expenditures in Canada has found that 6% - 16% of gamblers account for 75% of all reported expenditures (483)<sup>26</sup>.

Nonetheless, it is clear that many people enjoy buying the occasional lottery ticket and that for a minority of people, gambling more generally, is a valued recreational activity. Some economists have attempted to quantify this benefit in terms of ‘**consumer surplus**’ (e.g., 318),

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<sup>24</sup> It is also important to recognize that a significant portion of gambling revenue is also contributed by problem gamblers (who derive from all income groups) (484, 485).

<sup>25</sup> As a typical example, in Alberta in 2008 approximately 3/5 people purchased lottery tickets; 2/5 purchased raffle tickets; 1/3 purchased instant win tickets; 1/5 engaged in social gambling; 1/5 played EGMs (slots or video lottery terminals); 1/7 gambled at out-of-province casinos, 1/11 bet on sports; 1/11 purchased high risk stocks; 1/11 played casino table games; 1/20 played bingo; 1/25 bet on horse racing; and about 1/35 engaged in Internet gambling. For those who do gamble, the average number of forms engaged in was 2.4 (483).

<sup>26</sup> The 6% was estimated for Alberta in 2008/2009 and the 16% for Canada in 2007.

which is the difference between what people would be willing to pay for a product or service versus what they actually pay. An increase in consumer surplus is what the majority of studies identified as finding ‘increased leisure activity’ in the Summary Tables are actually referring to (studies 7, 8, 78, 351, 398, 436).

The utility of calculating consumer surplus is that it a) provides a more tangible quantification of an important positive impact of gambling that is often not taken into account when assessing the costs and benefits of gambling, and b) it serves as a counterpoint to the very tangible monetary costs of gambling. However, there are both practical and theoretical difficulties with this approach. The practical issues concern that fact that a) demand for gambling is not independent of its legal availability, b) it is unclear how to reliably establish what gamblers would be willing to pay for this service, and c) a significant portion of the demand and consumption of this service comes from problem gamblers (484, 485) (i.e., it is difficult to argue they derive much benefit from their addictive consumption).

The main theoretical problem with consumer surplus is that it is a poor way of capturing and characterizing the leisure benefit of gambling. The ‘value’ of gambling to the consumer has very little to do with the cost he/she is paying relative to the cost he/she would be willing to pay. In general, consumer engagement in commercial gambling has very little to do with rational economic choice, as commercial gambling opportunities always represent a losing proposition to the consumer, and most consumers tend to prefer forms of gambling with the lowest expected value (i.e., lotteries and instant win tickets). Furthermore, attempting to apply an arbitrary monetary amount to something that is clearly nonmonetary in its value to the participant perpetuates the erroneous notion that money is the appropriate metric upon which to judge the impact and/or the overall value of gambling. This same point applies to other ‘social’ impacts of gambling such as suicide, divorce, and the psychic trauma of being a problem gambler.

## Attitudes

Gambling is a value-laden activity. Some people consider it immoral and to have a negative impact on society. Other people believe it is a legitimate form of ‘voluntary taxation’ and that the economic benefits outweigh any negative social costs (11, 272, 365, 376). In either case, an argument can be made that the general public’s support or non-support of gambling is as important as gambling’s objective beneficial or detrimental effects. Thus, the actual impact of gambling introduction on attitudes toward gambling is an important issue.

As seen in the Summary Tables, the impact of gambling on people’s attitudes is quite varied, with roughly as many studies reporting more positive attitudes developing as studies reporting more negative attitudes developing. Several other studies report that individual attitudes have changed, but that the overall positive or negative sentiments of the community were unchanged.

There are patterns within these results that help explain this variability. An important one is that several studies have focused on the opinions of community leaders rather than those of the general population. Community leaders in government and business in these studies are almost uniformly positive about the impacts of gambling, emphasizing the additional revenue and the economic benefits (19, 20, 159, 217, 407, 483; not 207). This finding may reflect the backgrounds of these individuals (often from business, economics, law) and/or the fact that increased government revenue is a reliable effect of gambling introduction, and/or the fact that they may have been involved in having gambling introduced to their jurisdiction in the first place. In contrast, the attitude of the general populace is much more negative, with findings from most surveys in the United States indicating that far more Americans believe that gambling's effects on society are negative (316). The stark difference between positive attitudes of community leaders and negative attitudes of the general populace has been pointed out by Smith et al. (in press) in making the point that government gambling policy is often out of step with the opinion of its citizenry.

In most cases, direct and/or extended exposure to gambling has tended to increase negative public attitudes (e.g., 53, 82, 211, 216, 280, 310, 327, 360, 369, 442, 483). This is not always the case, as there are jurisdictions that have experienced significant economic benefits and consider that overall, the positives of gambling have outweighed the negatives (e.g., Nevada, 368; Deadwood, South Dakota, 269; Native casinos, 79, 217). Studies that have examined attitudes in more detail (e.g., 483) have also found that most people consider gambling to be a matter of personal choice (i.e., it is not an immoral activity), that legalized gambling is being conducted well, and that gambling revenue goes to appropriate causes. There are also significant demographic differences, with younger people, males, and heavier gamblers tending to have more positive attitudes toward gambling (Smith et al., in press).

### Quality of Life/Public Health/Social Capital/Values

Arguably the most important impact of gambling concerns its overall impact on the quality of people's lives. Some people have suggested that legalized gambling promotes capitalism and materialism, which are not necessarily conducive to social and societal harmony. Other people acknowledge that this is true, but that gambling and a capitalistic orientation also promotes risk-taking, individualism, and entrepreneurship, which is fundamental to economic success.<sup>27</sup> Economic success in turn improves living conditions, and thereby, societal well-being. Thus, as can be seen, discussions about quality of life are often linked to discussions about social capital, which are often linked to discussions about value systems (accounting for the inclusion of these different concepts in the present single category).

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<sup>27</sup> Yet other people point out that commercial gambling with its negative expected return does not facilitate 'good' risk-taking and that it also does not facilitate genuine entrepreneurship as it promotes the notion that something can be gained for nothing.

Unfortunately, impacts in this area are also the most difficult to measure. One problem concerns some lack of agreement on what constitutes 'quality of life' and how it should be measured. A second problem concerns the need for great scientific rigour in empirically disentangling these effects. For example, it is just as likely that western society's capitalistic/materialistic orientation is part of the reason why people have increasingly engaged in gambling and why political leaders have increasingly legalized it. (Although a more important reason likely concerns society's increased liberal attitudes toward historically prohibited activities such as prostitution, substance use, sexual orientation, etc.).

Several studies have reported impacts in this area. The most common report of positive impacts concerns the significant improvement in general living conditions and/or public health in North American Aboriginal communities that have hosted a successful new casino (94, 110, 131, 303, 324, 402, 431). However, there are also studies that report concerns with how the provision and participation in commercial gambling was potentially changing traditional Aboriginal culture, values, and beliefs (48, 138, 336, 473), related to the fact that gambling in North American Aboriginal culture has always had spiritual/ceremonial/social meaning, in contrast to the commercial/recreational orientation of western casinos (Williams, Stevens, Nixon, 2011). On the other hand, a few studies have reported enhanced cultural identity as a result of introducing such a successful commercial venture (110), and that casino profits have helped preserve and promote Aboriginal culture (324). In general, there is division of opinion about this enterprise, with social conflict and tribal factionalism not being uncommon (160). Interestingly, there have only been a couple of investigations (99, 336) examining whether the introduction of local casinos has exacerbated levels of problem gambling in Aboriginal communities which are estimated to be 3 to 4 times higher than in non-Aboriginal communities (Williams, Stevens, & Nixon, 2011).

While positive impacts on general living conditions are to be expected for profitable casinos in impoverished areas, studies that have looked at the impact of casinos in non-Aboriginal communities have found very little impact on overall quality of life (208, 321, 354, 467). Related studies have failed to observe differences in the specific areas of schooling outcomes (462) or health care delivery (205). An exception to this general trend was one study that described less desirable gambling impacts in Connecticut, pointing out the dramatic increase in highway traffic, DUIs, housing shortages, and various other social problems (401). Another exception to this general lack of impacts concerns *social capital*, where 3 studies have reported a decline in social capital as a result of casino (184, 311) or EGM (462) introduction. However, two of these studies are correlational in nature (184, 462), which does not rule out the possibility that communities with less social capital are simply more likely to introduce casinos and EGMs.

From a theoretical perspective, population-wide changes in quality of life seems unlikely when regular gambling involvement is restricted to a small percentage of the population and gambling revenue constitutes a very small percentage of most jurisdiction's GDP. Thus a more pertinent question concerns the impacts of gambling involvement on specific subgroups or at an individual level. On the positive side, there is at least one study finding casinos to have

psychological benefits for seniors (271). On the negative side, it is well established that heavy involvement in gambling is associated with poorer mental health and lower satisfaction with life, as heavy involvement is characteristic of problem gamblers (e.g., 76, 265, 483). It should also be remembered that problem gambling affects more than just the problem gambler, as population surveys show that a significant portion of problem gamblers are married and have children. Thus, in general, it is reasonable to assume that the percentage of people whose quality of life may be negatively impacted by problem gambling is actually 3 or 4 times the rate of problem gambling prevalence in the general population (Kalischuk et al., 2006; Shaw et al., 2007). Here again, however, it has to be remembered that the introduction of legal gambling is only partly responsible for the observed rates of problem gambling and therefore only partly responsible for these wider family impacts (i.e., problem gambling existed to some extent before the introduction of legal gambling).

There is very little research on the subjective well being of gamblers versus non-gamblers, or the relationship between subjective well being and level of gambling when excluding problem gamblers from the analysis. One representative study of Albertans (483) found that non-gamblers were significantly more likely to report being 'very happy' compared to gamblers. Here again, because this is correlational data, the directional nature of this relationship is not clear. When excluding non-gamblers and problem gamblers from the analysis, this same study found no significant association between level of gambling involvement and level of happiness, and no meaningful association between level of stress and level of gambling involvement.

## IMPACTS AS A FUNCTION OF TYPE OF GAMBLING

The present section will provide a brief description of the pattern of findings seen in the Summary Tables and their meaning for each of the different types of gambling. Many of the format-specific effects of gambling have been described in the previous section. This present section will explore these issues in more depth. This discussion is limited by the fact that gambling-specific impacts have not been thoroughly explored, with the exception of the impacts of casinos. There are several research studies that examine the impact of EGMs, but only a few on the impact of lotteries, Internet gambling, and horse racing. There are no research studies on the socioeconomic impacts of social gambling (e.g., poker), sports betting, or bingo. Thus, the present discussion is based on a combination of empirical evidence and theoretical speculation.

Examining gambling impacts as a function of type of gambling is, to some extent, akin to examining alcohol impacts as a function of alcoholic beverage type. What most strongly differentiates problem gamblers from non-problem gamblers is not the type of gambling they engage in, but the number of different types of gambling they engage in and the frequency with which they engage in them (Williams, West & Simpson, 2007; 2008). Thus, many of the social impacts of gambling are related more directly to society's overall level of participation (acknowledging that 'continuous' forms of gambling that provide a high frequency of play (i.e., EGMs, casino table games) provide a more intensive level of involvement (Dowling et al., 2005; Williams, West & Simpson, 2007; 2008)).

Although the social impacts of gambling may be more a function of the overall intensity of gambling involvement, this is less true for the economic impacts. Rather, the economic impacts of different forms of gambling vary quite considerably with regards to employment, property values, infrastructure value, infrastructure costs, and business revenue.

## CASINOS

### Indian Casinos

A large proportion of the empirical literature on the impacts of casino gambling concerns Native American casinos in the United States. These casinos have always been an important part of the U.S. casino market, responsible for 43.1% of all casino revenue in 2007 (AGA, 2009). They are also an important part of the economic development of U.S. Indian tribes, with 41.9% of all federally recognized tribes (237/565) in 2009 offering some form of gambling in 28 different states (NIGC, 2010).<sup>28</sup> Not surprisingly, there have been several prior comprehensive reviews of these impacts (27, 131, 150, 233, 418, 431, 467).

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<sup>28</sup> Indian gaming revenue in 2009 was \$26.5 billion from 419 casinos, bingo halls, and pull-tab operations (NIGC, 2010).

In general, the empirical research shows that the establishment of casinos on Indian reservations often has positive economic impacts for the tribe hosting the casino. This is manifest in the following ways: significant employment gains (22, 64, 94, 99, 110, 131, 138, 161, 233, 324, 402, 417, 418, 431, 467, 468; not 282); gains in personal income (27, 94, 161, 188, 233, 282, 418, 431); increases in infrastructure value (22, 110, 133, 188, 396, 402, 418); increases in tribal services to band members (64, 94, 99, 110, 402); spin-off benefits for non-gambling businesses (110, 166, 396); as well as improvements in general living conditions, and/or public health (48, 94, 110, 131, 303, 324, 402, 431). It is not uncommon for the economic benefits to also be experienced in adjacent non-Native communities (28, 64, 99, 110, 131, 188, 417, 419, 425, 431).

An important caveat to these positive impacts concerns the fact there is considerable variability in the magnitude of the economic benefits between tribes which relates to casino profitability. In 2009, 16.9% of Indian gaming operations in the United States accounted for 69.5% of Indian gaming revenue, with many other casinos just barely making a profit (NIGC, 2010). In general, the more profitable operations are located close to major cities, have less competition from non-Native casinos, and provide 'destination' style venues.

Indian casinos have some negative social impacts for Native Americans. One study found that casinos resulted in decreased educational attainment for Native youth (233) (i.e., less need for education with casino employment available), although another study found the opposite (282). Concerns have been expressed about how the provision and participation in commercial gambling was changing traditional Aboriginal culture, values, and beliefs (48, 138, 160, 336, 473). This is partly related to the fact that gambling in North American Aboriginal culture has always had spiritual/ceremonial/social meaning, in contrast to the commercial/recreational orientation of western casinos (Williams, Stevens, Nixon, 2011). On the other hand, a few studies have reported enhanced cultural identity and pride as a result of introducing such a successful commercial venture (110), and that casino profits have been used to help preserve and promote Aboriginal culture (324). Overall, there is a division of opinion about the appropriateness of commercial gambling within many Native communities, with this division often occurring between the elders versus the younger generation. This and other disputes concerning how casino revenue is managed and disbursed, has led to some intratribal conflict and factionalism (Barlett, & Steele, 2002; 138, 160, 311, 473). Interestingly, with the exception of 2 reports (99, 336) there has been very little investigation of whether the introduction of local casinos has exacerbated levels of problem gambling; levels which are already 3 to 4 times higher than in non-Aboriginal communities (Williams, Stevens, & Nixon, 2011).

## Non-Indian Casinos

Findings for Indian casinos do not necessarily generalize to non-Native casinos or casinos in other parts of the world. The important impact-shaping features of Native American casinos concern the fact that: a) most Indian casinos are established in economically depressed areas, thus the influx of money has a fairly dramatic impact; b) the patronage base comes from

outside the community, thus representing an influx of new wealth; c) there is a lack of competition from other casinos.<sup>29</sup> When these circumstances exist, then somewhat similar results can be expected, as seen in economically depressed regions of Mississippi and South Dakota (8, 52, 70, 133, 275, 396, 440).

More generally, and as stated earlier in the Business Revenue section, the introduction of gambling has the greatest potential to have broad positive benefits to the local economy when the revenue comes from outside the area. Destination casinos have greater potential to do this compared to most other forms of gambling. When the casino patronage base is from the local area it is much less likely there will be beneficial impacts on other sectors of the economy (i.e., just substitution effects). However, also as stated before, regardless of patron origin, economic benefits to gambling venues, gambling-related businesses, or any geographic area usually occurs at the expense of other geographic areas and/or business sectors.

When casinos are situated in more economically robust locales, the positive economic impacts are mixed or muted (e.g., 62, 149, 153, 200, 357, 382, 409, 467, 468). Similar mixed or modest results occur when new casinos are placed in a more competitive casino environment (e.g., 53, 147, 483).

The above discussion explains the primary factors that influence the economic impacts of casinos (primarily in the areas of employment and revenue for non-gambling businesses). There are several other impacts of casinos that tend to be more invariant:

- Casinos are more reliably related to increased government revenue and increased public services because they tend to generate more revenue than other forms of gambling.
- Casinos have reliably increased government regulatory costs associated with them.
- Casinos are one of only two forms of gambling (the other being horse racing) that reliably increases infrastructure value.
- Casinos are the only form of gambling that sometimes have associated infrastructure costs.
- Casinos are the only form of gambling that have potential to positively impact property values.
- Casinos have greater addiction potential because they offer continuous forms of gambling (EGMs and casino table games), and thus are more reliably associated with increased rates of problem gambling and related indices when they are first introduced.
- Casinos have a higher potential for increasing crime than other forms of gambling because they contribute more to problem gambling (and therefore problem-gambling related crime), because they provide additional opportunities for crime (e.g., money laundering, passing counterfeit money), because of the clientele they attract, and because they serve alcohol. Even so, the actual impacts on crime tend to be mixed, and the impacts, when they occur, are usually not large.
- Casinos, like most other forms of gambling, are economically regressive.

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<sup>29</sup> Many Native casinos in Canada, for example, have to directly compete with non-Native casinos, most of which were established prior to the Native casinos.



- Casinos have relatively little impact on overall leisure behaviour because they are patronized by the minority of the population.
- Casinos contribute toward somewhat more negative attitudes toward gambling (depending on the jurisdiction and the specific group being surveyed).
- As mentioned, when casinos generate significant economic benefits to an impoverished community, then the quality of life for its residents is reliably improved. Aside from this situation, no population-wide changes are usually found (205, 208, 321, 354, 467). The one study finding a decrease in social capital related to the presence of casinos (184) was correlational in nature, which does not rule out the possibility that communities with less social capital are simply more likely to introduce casinos. A caveat to this general lack of impact on quality of life is that the small minority of people who are heavy casino gamblers will usually have poorer mental health and that the negative mental health of these individuals likely has some negative impact on their families. However, as mentioned earlier, the introduction of casinos is only partly responsible for the observed rates of problem gambling and therefore only partly responsible for these wider family impacts. Another caveat is that there is at least one study finding casinos to have psychological benefits for seniors (271).

## ELECTRONIC GAMBLING MACHINES

The socioeconomic impacts of EGM introduction tends to be more invariant than the impacts of casinos. However, there are two important variables that mediate these impacts. The first is the number of EGMs introduced relative to both the number that already exist and to population size. The second variable is the type of EGM that is introduced. Although there has been virtually no empirical study of this issue, low stake EGMs with limited prize size that are common in European countries appear to cause fewer problems than the high stakes high prize EGMs common in most other countries (Williams et al., 2007; 2008).

Assuming a significant increase in the number of high stakes EGMs into a jurisdiction, then the impacts of EGMs are typically as follows:

- EGMs are a reliable source of increased government revenue (6, 34, 113, 310, 353, 428) and increased public services (6, 10, 227, 310, 399), because of the significant revenue-generating potential of EGMs relative to all other forms of gambling.
- EGMs are reliably associated with increased government regulatory costs, similar to other forms of gambling (428).
- EGMs have relatively little potential for adding to infrastructure value. However, the only investigation of this issue found that the introduction of EGMs stimulated significant facility improvements to accommodate the new machines (34).
- EGMs have relatively little potential for creating infrastructure costs, but there has been no empirical research on this topic.

- EGMs almost always draw their money from within a jurisdiction and thus tend to reliably have negative impacts on other businesses when they are introduced in large numbers (57, 113, 327, 346, 399).
- There is no empirical evidence or theoretical reason to expect EGMs to have any impact on personal incomes (of the general population).
- There is no empirical evidence or theoretical reason to expect EGMs to have any impact on property values (462).
- In Western countries, more problem gamblers report problems with EGMs than any other form of gambling (Dowling et al., 2005). This is related to the fact that they are 'continuous' forms of gambling that offer a much higher frequency of play/reinforcement (Williams, West & Simpson, 2007; 2008). Thus, EGMs tend to be reliably associated with increased rates of problem gambling and indices related to problem gambling when they are first introduced (4, 10, 13, 34, 65, 227, 314, 327, 411), but not after they are increased after extended prior exposure (6, 14).
- EGM introduction has a slightly positive relationship with increased crime due to its relationship with increased problem gambling (462, 476, 14).
- EGMs are the least labour intensive form of gambling (except in the situation where they are manufactured in the same jurisdiction). Thus, when revenue is diverted to EGMs from other businesses it is negatively impacting businesses sectors that employ more people and thereby creating a net decrease on overall employment. On the other hand, the additional revenue that the EGM bar or hotel generates (either from direct EGM revenue or additional patronage of their venue) can potentially allow that venue to expand their other services, leading to additional employment and no net loss of employment. Empirically, the evidence is very limited and mixed (6, 34, 280 310, 314, 327, 346).
- EGMs, like most other forms of gambling, are economically regressive (113, 281, 399, 475, 485).
- EGMs have little impact on overall leisure behaviour because they are patronized by the minority of the population.
- EGMs contribute toward more negative attitudes regarding gambling (310, 327) although sometimes not when they are first introduced to communities with limited prior exposure (34).
- There is no strong theoretical reason to expect population-wide impacts of EGMs on quality of life, but negative subjective well-being will be reliably associated with the minority of people who have high amounts of expenditure or time on EGMs (265). The poorer mental health of these individuals also has a negative impact on their families.

## LOTTERIES

The socioeconomic impact of lotteries has been the focus of only 16 studies. Furthermore, almost all of these studies have had a circumscribed scope, examining only one or two impact areas.

These studies show that lotteries reliably increase government revenue (5, 108, 290, 477). This positive relationship with government revenue is expected to be stronger than other forms of gambling, as lotteries are the type of gambling most likely to be directly provided by state or federal governments. For a similar reason, it is reasonable to speculate that regulatory/administrative costs are higher for lotteries compared to other forms of gambling. However, there is no empirical research on either of these issues. Research indicates that increased government revenue usually leads to increased public services (5, 290, 331, 477), but this is not always the case, even when the money is specifically earmarked for certain purposes (i.e., education; 331).

There is no research of the impact of lotteries on infrastructure value or infrastructure costs. However, it seems unlikely that lotteries would have significant impacts on either of these variables.

There has only been one study examining the impact of lotteries on other businesses, however, this is a comprehensive study that examined the impacts of state lotteries in the United States between 1982 and 1998 (228). This study found that the introduction of a state lottery was associated with an average decline of \$46 per month, or 2.4%, in household expenditure. The decreased expenditures were primarily for food, rent, mortgage, and other bills. Although more research on this area is certainly warranted, there are theoretical reasons to believe that this finding would be replicated in other jurisdictions and other time periods. First, because most state/provincial lottery revenue comes from state/provincial residents, there is no influx of new money and therefore much less chance there will be beneficial effects on other businesses. Second, because lotteries are economically regressive, money spent on lotteries is likely money that is being diverted from other expenditures. Third, lotteries tend to decrease the utilization of money within the economy<sup>30</sup> as they take small amounts of money from a large number of people (who would have used this money for other things) and give large amounts of money to just a few people (who will put most of it into savings).

There are no studies on the impacts of lotteries on personal income, and no theoretical reason to expect broad population based impacts. There are also no studies of the impacts of lotteries on property values, but again there is no theoretical reason to anticipate impacts.

Problem gamblers often participate in lotteries, but it is less common for problem gamblers to spend excessive amounts on lotteries or to report that lotteries are a form of gambling that is significantly contributing to their problems. Thus, there is very little theoretical reason to

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<sup>30</sup> See Part 1 of this document concerning principles underlying true economic impacts.

expect that lotteries should increase problem gambling or related indices. One study (66) of Louisiana parishes found that parishes with higher per capita spending on lotteries experienced a greater increase in the suicide rate between 1989/1990 and 1994/1995 as compared to parishes with per per capita expenditures on lotteries. Another study (251) found that the presence of a state lottery had mixed effects on state consumer bankruptcy filings, with increases in one state (Georgia), but not another (Indiana).

There are no studies that examined the relationship between lotteries and crime. Lotteries do not appear to create additional opportunities for crime to the same extent that casinos do. They also bear a weaker relationship to problem gambling. Thus, it is unlikely that lotteries have a significant impact on crime, other than to decrease participation in illegal lotteries.

An investigation of the Georgia state lottery in the 1990s found it to create new jobs and attracting new residents to the state (290). It is less clear that the same effect would occur today because of the proliferation of state lotteries. This same study found there to be strong public support for the lottery because of its funding of education (290). Anecdotally, the public's attitude toward lotteries appears to be more positive than most other forms of gambling. This is also reflected in the fact that lotteries are the only form of gambling in which the majority of the population participates, illustrating its value as an additional leisure pursuit.

By far the most common investigation with respect to lotteries concerns whether they are economically regressive. All of these investigations have found this to be true (5, 47, 51, 144, 145, 158, 290, 348, 478).

There is no research on the impacts of lotteries on quality of life or related indices. It seems unlikely that impacts would be experienced in these areas.

## INTERNET GAMBLING

Internet gambling has been steadily expanding since its introduction in the mid 1990s (488). In March 2011, there were 2,240 Internet gambling web sites owned by 637 different companies operating in 78 different jurisdictions (Casino City, 2011).<sup>31</sup> These sites consist of 744 online casinos, 452 poker rooms, 404 sports and racebooks, 377 online bingos, 96 lottery sites, 41 skill game sites, 18 mahjong and rummy sites, 17 betting exchanges, and 13 backgammon sites (Casino City, 2011). The top 5 jurisdictions in terms of number of Internet gambling sites are

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<sup>31</sup> Online.casinocity.com is the world's most comprehensive and widely used online gambling portal. It provides a continually updated listing and access to the 2,240 available online sites, as well as ranking of their relative popularity based on monitoring and measuring the actual site usage of millions of online users. The portal also provides a comprehensive listing of online gaming jurisdictions, online gaming site owners, online gambling software, and online gambling news. While it is not possible to independently verify their rankings of gambling site popularity, one of the present authors (Williams) and others (e.g., McNeal, 2006) have found most of their other information to be fairly accurate.

Malta (414 sites), Gibraltar (288 sites), Netherland Antilles (284 sites), Costa Rica (200 sites), and Kahnawake Territory in Quebec (190 sites). However, the top 5 jurisdictions in terms of volume of Internet gambling transactions are the United Kingdom, Isle of Man, United States<sup>32</sup>, Alderney, and Tasmania. Past year participation in Internet gambling varies between countries, with the highest rates in 2010 being in the United Kingdom and Sweden at ~11% (UK Gambling Commission, 2011; personal communication from Swedish Ministry of Health to R. Williams). Prevalence rates in most other western countries are in the range of 1% to 7% (488). Total share of the global gambling market is steadily increasing and currently estimated to be 7.1% (Global Betting & Gaming Consultants, in press).

Although hundreds of scholarly articles have been written on Internet gambling, the large majority concern legal issues and policy options. Another minor focus has been on the characteristics of Internet gamblers, showing them to be more likely to be male, younger, and to have 3 to 4 times higher rates of problem gambling (488, Williams & Wood, 2007; Williams, Wood & Parke, in press; Wood & Williams, 2007). However, virtually all of these latter studies are correlational in nature, and therefore do not really qualify as 'impact' studies that can shed light on the causal relationship between Internet gambling and problem gambling.

One large scale online study of 12,521 adults from 105 countries (488) does indirectly speak to impacts, in that the investigators found less than half of all Internet problem gamblers reported that Internet gambling was responsible for most of their problems. This study concluded that Internet gambling does contribute to the development and/or exacerbation of problem gambling due to its 24 hour accessibility, ability to play while intoxicated, lack of responsible gambling features, and the fact that it offers online forms of 'continuous' gambling (EGMs, casino table games). However, at the same time, the high rate of problem gambling among Internet gamblers probably has more to do with problem gamblers simply adding Internet gambling to their gambling repertoire, as Internet gamblers engage in *all* types of gambling more frequently than their land-based counterparts (488).

An even more benign conclusion about Internet gambling has been reached by researchers affiliated with the Institute for Research on Gambling Disorders at Harvard University in their analysis of the real-time Internet gambling behaviour of over 40,000 subscribers to the online gambling company bwin.com. These investigators found that a large majority of bwin.com gamblers have moderate levels of engagement in sports betting, casino gambling, and online poker in terms of frequency and money spent, and that only a small minority of individuals escalate their gambling behaviour and/or end up closing their accounts because of self-identified problems (LaBrie et al., 2008; LaBrie et al., 2007; LaPlante et al., 2009; Nelson et al., 2008; Shaffer et al., 2010; Xuan & Shaffer, 2009; 252). However, important caveats to this research concern the fact that bwin.com is one of the more socially responsible online sites, the bulk of its patronage is European (it is an Austrian based site that does not accept U.S.

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<sup>32</sup> Online games of skill, horse race wagering, and lotteries.

customers), and no standardized measures of problem gambling have been administered in these studies (i.e., gambling behaviour and problem gambling have an imperfect relationship).

There is only one study that has directly tried to assess the impacts of Internet gambling, which looked at the impacts on Australia in 2002/2003 (21). This study estimated that about 50% of Internet gambling was a substitute for other forms of gambling, and about 50% represent additional gambling activity. The accuracy of these proportions is unclear. However, it is clear that Internet gamblers engage in *all* types of gambling more frequently than their land-based counterparts as well as having higher average gambling expenditures relative to non-Internet gamblers (488). Thus, the evidence suggests that heavy gamblers add Internet gambling to their repertoire rather than substitute it for other forms.

The introduction of legal forms of Internet gambling, like other forms of gambling, will reliably increase government revenue either through taxation or direct provision (21). There will be reliable regulatory costs associated with this, with the magnitude of these costs depending on whether multiple domestic providers are permitted, whether outside providers are allowed to provide services, and whether gamblers are legally allowed to gamble at non-domestic sites (21). The provision of Internet gambling may result in or require infrastructure upgrades in the area of telecommunications (21).

Internet gambling is associated with increased levels of crime because it offers additional opportunities for criminal activity (e.g., money laundering; sites not paying winnings; 'free-play' sections with deceptive odds; players hacking the sites to gain winnings; use of poker-bots or collusion among online poker players; extorting sites in lieu of denial-of-service attacks) (296, 488, McMullan, in press).

An area where Internet gambling differs from other forms of gambling concerns the fact that Internet gamblers tend to be somewhat better educated and have higher incomes (488). Thus, Internet gambling may not be economically regressive.

Internet gambling is the least commonly patronized form of gambling in most jurisdictions, and therefore has minimal impacts on overall leisure activity of the populace (488).

Attitude toward Internet gambling tends to be somewhat negative, although this does vary as a function of country (488).

## HORSE RACING

There are only 2 studies on the socioeconomic impacts of horse racing. It has been found that horse racing increases government revenue (104), and public services deriving from increased government revenue (although not to the same degree as more lucrative forms of gambling). Government costs related to regulation are also increased. Race tracks add to the infrastructure assets of a community and have minor associated infrastructure costs. Their impacts on property values are unknown, but impacts are not expected. In most jurisdictions horse racing will have little impact on other businesses as the revenues involved are small relative to other forms of gambling. However, horse racing is a 'bigger business' in some jurisdictions (e.g., United Kingdom) and has the potential to have positive spin-offs to other businesses in these situations (104). Horse racing is more labour intensive than other forms of gambling. It supports people in the racing sector and indirectly supports farmers who grow horse feed and those employed in breeding and raising horses (104). Horse racing is associated with problem gambling, but not to the same degree as certain other forms (EGMs, casino table games, Internet gambling). Because it does have a minor contribution to problem gambling, and because horse racing does offer a few additional opportunities for crime to be committed (i.e., race fixing), it should bear a small positive relationship to increased crime. Horse racing is expected to be economically regressive like other forms of gambling. It does not have a significant impact on leisure activity because it is patronized by a minority of the population. No overall impacts on quality of life have been documented or are anticipated other than poorer mental health for people heavily involved in wagering on the activity.

## SUMMARY OF FORMAT-SPECIFIC IMPACTS

The following table summarizes the *usual* impacts of gambling as a function of gambling format, with possible impacts ranging from large and positive (+4) to large and negative (-4).

|                                              | CASINOS  | EGMs     | LOTTERIES | INTERNET GAMBLING | HORSE RACING |
|----------------------------------------------|----------|----------|-----------|-------------------|--------------|
| Government Revenue                           | +2 to +3 | +2 to +3 | +2 to +3  | +1                | +1           |
| Public Services                              | +2       | +2       | +2        | 0 to +1           | 0 to +1      |
| Regulatory Costs                             | +1       | +1       | +1 to +2  | +1                | +1           |
| Infrastructure Value                         | +1       | 0        | 0         | 0                 | +1           |
| Infrastructure Costs                         | +1       | 0        | 0         | 0                 | +1           |
| Business Starts & Business Revenue           | -1 to +2 | -1       | -1        | 0                 | 0 to +1      |
| Business Failures                            | 0 to +1  | +1       | +1        | 0                 | 0            |
| Personal Income                              | 0 to +2  | 0        | 0         | 0                 | 0            |
| Property Values                              | 0 to +1  | 0        | 0         | 0                 | 0            |
| Problem Gambling & Related Indices           | +1 to +2 | +1 to +2 | 0 to +1   | +1 to +2          | +1           |
| Crime                                        | +1 to +2 | +1       | -1 to 0   | +1                | 0 to +1      |
| Employment                                   | 0 to +2  | 0 to -1  | 0         | 0                 | +1           |
| Socioeconomic Inequality                     | +1       | +1       | +1        | 0                 | +1           |
| Leisure Activity                             | 0        | 0        | +1        | 0                 | 0            |
| Attitudes                                    | -1 to -2 | -2       | +1        | -1 to -2          | -1           |
| Quality of Life/Public Health/Social Capital | -1 to +1 | -1 to 0  | 0         | 0                 | 0            |



## DISCUSSION

There has been considerable debate about the best methodological and theoretical approach to analyzing the social and economic impacts of gambling, with one of the central issues being how to aggregate the social impacts with the financial impacts to arrive at an overall summative measure. However, there is no reliable way of doing this. Judging the overall positive or negative nature of gambling will always be a subjective determination about the relative importance of the observed social impacts compared to the observed economic impacts. This does not mean that high quality socioeconomic analyses of gambling cannot be conducted. Rather, there are many basic principles for conducting socioeconomic impact studies that can ensure that the obtained results are comprehensive, provide a meaningful accounting of the social impacts of gambling, and are scientifically rigorous. These principles are outlined in the first section of this report.

In light of these methodological principles, the second section of this report provided an exhaustive review of what is known about the social and economic impacts of gambling, including a compilation of 492 studies on this topic, and a summary of the findings of these studies in a series of tables organized by impact area and type of gambling. These Summary Tables provide a useful documentation of which types of gambling have been most and least studied, the types of impacts that have been most and least studied, and the general pattern of results in terms of whether a particular form of gambling has found increases, decreases, no impact, or just changes in that impact area. Additionally, these tables provide a reference source for other researchers who may wish to conduct even more in-depth analyses of specific domains or types of gambling.

The most consistent economic impacts across all forms of gambling tend to be:

- increased government revenue
- increased public services
- increased regulatory costs (a relatively minor expense)
- either positive or negative impacts on non-gambling businesses

The most consistent social impacts across all forms of gambling tend to be:

- increased problem gambling, with most of this increase occurring after initial introduction
- increased crime (to a small extent)
- increased socioeconomic inequality (to a small extent)
- more negative attitudes toward gambling

The Summary Tables are not without problems. A few studies are published in more than one article, and therefore have two listings for the same work. A similar duplication issue arises when different studies conduct independent analyses using the same data. Another problem is that these studies are primarily conducted in North America and the majority of analysis concerns impacts that occurred in the 1990s.

However, the most serious limitation of the tables is that they provide inadequate context for the pattern of results. As stated in the first part of this paper, and as clearly evidenced in the results of the present studies, the impacts of gambling are strongly mediated by several other important variables. These variables are as follows:

1. The magnitude of the change in gambling availability that has occurred for the population. A large new casino in a small community with limited prior exposure to gambling has a much larger impact than, for instance, adding additional EGMs to a large metropolitan area that already has access to these devices.
2. The type of gambling that is being introduced. Different forms of gambling have different patterns of impacts.
3. The length of time that gambling has been legally available in the jurisdiction prior to the introduction of additional or new forms. Many of the negative social impacts of gambling (e.g., problem gambling) are most apparent in populations with limited prior exposure to gambling.
4. Whether patrons and revenues are locally derived or come from outside the jurisdiction. Out-of-jurisdiction patronage has a strong relationship to positive economic and social impacts at the local level. When patronage and revenue is local, there are primarily substitution effects with little net benefit.
5. The type and extent of gambling opportunities in neighbouring jurisdictions. This influences the likelihood that new gambling opportunities will attract out-of-jurisdiction patrons, which is strongly related to the potential for positive economic impacts.
6. The strength of jurisdictional policies and educational programs to mitigate the negative effects of gambling.
7. Baseline levels of community impoverishment. An influx of new revenue to an impoverished area has much more dramatic effects on the general economy.
8. Whether the impacts are being examined at a micro community-specific level, or whether larger macro regional impacts are taken into account. Community specific impacts are much more likely to be positive, but regional-wide benefits are rarer.
9. The length of the time in which impacts are evaluated.
10. How gambling revenue is ultimately disbursed.

Depending on these variables, the overall impact of gambling in a particular jurisdiction in a specific time period ranges from small to large, and from strongly positive to strongly negative. *That being said, in most jurisdictions, in most time periods, the impacts of gambling are mixed, with a range of mild positive economic impacts offset by a range of mild to moderate negative social impacts.*

## Recommendations for Future Research

1. The impacts of certain forms of gambling are not well identified and require more research. The highest priority for study is Internet gambling. Furthermore, excellent research opportunities currently exist for before-after impact studies and cross-jurisdictional comparisons of jurisdictions with legal availability versus jurisdictions without. Other forms of gambling that also merit further study are social gambling (poker), lotteries, horse racing, and bingo.
2. Certain types of impacts have not been studied to any significant extent and would benefit from more research; specifically, the impacts of gambling on property values, regulatory costs, social capital, and values.
3. More research is required on the social and economic impacts of gambling in European countries and non-Western jurisdictions.
4. More research is required on the impact of gambling on indigenous peoples outside of the United States (e.g., Canadian First Nations, Australian Aborigines, New Zealand Maori).

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## APPENDIX: Studies Examining the Socioeconomic Impact of Gambling

1. Aasved, M. J. and Laundergan, J. C. (1993). Gambling and its impacts in a Northeastern Minnesota community: An exploratory study. *Journal of Gambling Studies*, 9(4), 301-319.

*This exploratory study was undertaken to assess the effects of legalized gambling in a northeastern Minnesota community and to inform the state's citizens and decision makers of the impacts of gambling. The community, the types of gambling available, and the types of businesses and organizations involved in gambling are described. Annual (1990) amounts of money won and lost, profit margins for various types of gambling, and the resulting economic and social community impacts are discussed. The most consequential findings are the amounts of money spend on gambling (twice the state's per capita average) and the resulting community revenue losses (nearly \$2 million or \$105 per person) annually. Nevertheless, many local citizens want even more gambling opportunities. Public policy and future research issues are raised.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries; Charitable Gaming

**Location(s):** United States -- Minnesota -- Virginia

**Years Impacts Examined:** 1990-1991

**Impacts:** Economic: Increased Public Services (\$2-million / year collected by the State)

Social: Increased Leisure Activity (provides entertainment in an area with few other options available); Increased Employment (at the Minnesota State Lottery Regional Office as well as jobs for charitable gambling attendants, sales personnel, and gambling managers); Increased Problem Gambling (Gamblers Anonymous membership has increased substantially)

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2. Aasved, M. J., Schaefer, J. M. and Merila, K. (1995). Legalized gambling and its impacts in a central Minnesota vacation community: A case study. *Journal of Gambling Studies*, 11(2), 137-163.

*Studied the economic and social effects of legalized gambling in a Minnesota community. The community and the types of gambling available are described. Data on gambling expenditures were obtained from various state agencies. Lottery and casino winners were interviewed to discover how their winnings were distributed. Annual (1991) player losses, profit margins, taxes, and resulting economic and social impacts are discussed. The most consequential findings were estimates of annual player losses (\$3.3 million; \$205 per capita) and community revenue losses (\$2.2 million; \$138 per capita). Per capita lottery and charitable gambling player losses were 9.4% lower than those of a community studied earlier; per capita community revenue losses were 7.6% lower.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Charitable Gaming; Lotteries; Casinos; Indian Gaming -- Casinos

**Location(s):** United States -- Minnesota -- Brainerd-Baxter

**Years Impacts Examined:** 1990-1992

**Impacts:** Economic: Increased Public Services (in 1991, \$893,040, or half the charitable gambling money raised in the community, actually went for charitable purposes; 9% or \$28,289,242 went into the State of Minnesota's General Fund for the benefit of all taxpayers); Increased Infrastructure Value (stimulation of local economies through new construction and development); Increased Business Revenue (lottery vendors receive sales commissions of 5%; casinos attract tourism-related spending)

Social: Changed Leisure Activity (provides a new means of entertainment); Increased Employment (creates sales jobs); Increased Problem Gambling; No Impact on Crime (based on interviews with local law enforcement personnel).

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3. Abaris Group (2009). *Public health impacts of the proposed Point Molate casino*. Walnut Creek, CA: Abaris Group.

*The Abaris Group was asked by Contra Costa County to conduct an analysis of the expected public health impact of a new casino proposed for Point Molate in the City of Richmond by updating a previous study conducted in 2005 that assessed the level of problem and pathological gambling and the public health impact of a proposed casino expansion in San Pablo, California. To update the study, The Abaris Group conducted a literature search, Internet research, reviewed several documents, and worked with Contra Costa Health Services staff regarding the expected health impact of the proposed Casino at Point Molate on the county (tobacco use, asthma, and traffic injuries). As in 2005, much of the research available today on the public health impact of casinos focused on problem and pathological gambling and the negative impacts that result from these diseases. The research that was cited in the previous 2005 study is still valid. In fact, while there have been new studies on the impact of gambling on public health and other social behaviors, the most important study that pertains to this paper is a major prevalence study on problem and pathological gambling in California that was conducted in 2006.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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4. Abbott, M. (2006). Do EGMs and problem gambling go together like a horse and carriage? *Gambling Research: Journal of the National Association for Gambling Studies (Australia)*, 18(1), 7-38.

*It is widely believed that increased gambling exposure, particularly to electronic gaming machines (EGMs) and other 'continuous' forms, leads to a rise in gambling-related harms including problem gambling. Relevant literature, including studies conducted by the author, is critically reviewed to assess the validity of this belief. While jurisdictions with high exposure often have elevated problem gambling prevalence relative to those with low exposure, in others this relationship is attenuating or reversing. In New Zealand and Australia, despite substantial increases in EGM availability and expenditure, current national prevalence estimates are between a third to a half what they were 15 years ago. In Australia there are indications that the relationship between availability and prevalence breaks down somewhere between six to 10 EGMs per 1,000 adults. EGM reductions and the introduction of caps generally appear to have little impact. While regular EGM participation is strongly linked to problem gambling, problems associated with this gambling form appear to be typically of short duration. It is concluded that exposure to the agent gambling is multidimensional and that the effects of exposure are complex. Understanding the drivers of problem gambling requires recognition of this complexity including consideration of the role of individual and environmental risk and protective factors.*

#### **GOOD QUALITY**

**Type:** Secondary Analysis

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Worldwide

**Years Impacts Examined:** N/A

**Impacts:** Social: Increased Problem Gambling (Relationships between EGM exposure, participation and problem gambling; substantial increase in problem gambling until saturation point)

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5. Abdel-Ghany, M. and Sharpe, D. L. (2001). Lottery expenditures in Canada: Regional analysis of probability of purchase, amount of purchase, and incidence. *Family & Consumer Sciences Research Journal*, 30(1), 64-78.

*Examined the incidence of lottery expenditures and the effect of household socioeconomic and demographic characteristics on expenditures in 6 regions of Canada, using a double hurdle model to distinguish between the decision to play and the decision of how much to spend. Using the 1996 Canadian Family Expenditure Survey for 10,079 household residents, the results portray the profile of households that have the probability of becoming participants in lottery play as well as the profile of households that spend more on lottery purchases. In general, lottery expenditures increased as household after-tax incomes increased, and lottery expenditures declined as the education level of the reference person increased. It is concluded that lottery expenditures were regressive for taxpayers in all regions. Public policy implications are discussed.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries

**Location(s):** Canada

**Years Impacts Examined:** 1996

**Impacts:** Economic: Increased Government Revenue (significant generator of revenue for governments); Increased Public Services (significant generator of revenue for charities).

Social: Increased Socioeconomic Inequality (percentage of after-tax income spent on lottery declines as income increases in every region. Therefore, from the standpoint of public policy makers, we conclude that the lottery tax in Canada is regressive.)

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6. ACIL Tasman (2006). *The impact of gaming on Ballarat revisited*. Melbourne, Australia: ACIL Tasman.

*In late 2004 Tattersall's commissioned ACIL Tasman to reprise the 2001 report on the impacts of gaming on Ballarat on the same basis under which it had been undertaken by ACIL Consulting. The merger of ACIL Consulting with Tasman Economics created ACIL Tasman in November 2002. ACIL Tasman was commissioned to undertake an independent, rigorous and comprehensive analysis of the changes in the economic and social impacts associated with gaming machines on Ballarat that have occurred in the municipality since the 2001 report. As with the original study, the primary objectives of the reprised study were to identify, and wherever possible quantify, all the impacts that are associated with gaming in the Ballarat local government area together with their implications for the economic welfare of the residents of Ballarat. One of Tattersall's key requirements for the original analysis was that it should represent the benchmark for the assessment of the economic and social impacts of gaming at the local level in Victoria. This reflected the need for such assessments to be the product of a rigorous, independent and professional process.*

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- Victoria -- Ballarat

**Years Impacts Examined:** 2004

**Impacts:** Economic: Increased Government Revenue (gaming tax of \$20 million a year; 40 cents in every dollar spent on gaming in Ballarat accrues to the Government); Increased Public Services (indirect benefits from their gaming taxes in the form of public health, educational and community services).

Social: Increased Employment (450 direct jobs in terms of their full-time equivalents, up by 5 per cent from 2001); Changed Leisure Activity; No Impact on Problem Gambling (Less than one per cent of Ballarat adults were problem gamblers, which is unchanged from 2001.)

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7. ACIL Tasman (2006). *The economic impact of gambling on the Northern Territory*. Melbourne, Australia.

*The past decade has seen a significant expansion in gambling in the Northern Territory but relatively little research into its impacts. Accordingly the NT Community Benefit Fund Committee has commissioned a consortium lead by Charles Darwin University (CDU) to undertake a series of research projects into the impacts of gambling in the*

*Northern Territory, with particular reference to the impacts of electronic gaming machines on the Territory. As part of this research program, CDU has engaged ACIL Tasman to undertake an assessment of the nature and the extent of the economic impacts. This report outlines the results that were obtained in the course of this work.*

**Type:** Original Research

**Gambling Format:** EGMs; Casinos; Horse Racing; Dog Racing; Horse Racing -- Off-Track; Lotteries; Internet Gambling

**Location(s):** Australia -- Northern Territory

**Years Impacts Examined:** 2003; 2004; 2005

**Impacts:** Economic: Increased Government Revenue (tax revenue for the NT Government of \$42 million in 2003-04 and \$52 million in 2004-05.); Increased Public Services; Increased Business Revenue (gambling sector spent about \$174 million a year on goods and services that are produced by other industries); Increased Regulatory Costs; Costs Related to Problem Gambling (external costs of problem gambling in the Territory of between \$9 million and \$28 million a year)

Social: Increased Consumer surplus of between \$40 million and \$86 million in 2003-04, and between \$42 million and \$91 million in 2004-05.

8. Ackerman, W. V. (1997). Deadwood, South Dakota: Gambling, historic preservation, and economic revitalization. *Rural Development Perspectives*, 11(2), 18-24.

*Gambling in Deadwood is responsible for increasing recreational visits and spending, generating nearly 1,800 new jobs in the town and surrounding communities, and boosting tax revenues. Increased tax and business revenues paid for infrastructure improvements and historic preservation that has brought back much of the 1890's Victorian look of the town. Gaming caused the loss of some retail activity and generated parking shortages and traffic congestion, but, overall, it has helped to preserve an important historical landmark and to revitalize the local economy.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- South Dakota -- Deadwood

**Years Impacts Examined:** 1990-1995

**Impacts:** Economic: Increased Government Revenue (taxes and fees of \$43.4 million during its first 6 years. Deadwood has received over half of these revenues for historic preservation activities); Increased Public Services; Increased Infrastructure Value; Increased Infrastructure Costs (civic services budget increase; traffic congestion); Increased Business Failures (three-fourths of the businesses on the historic Main Street became casinos; lost businesses offering new car sales, ladies clothing, ladies shoes, and appliances along with the town's only department store and its only furniture store); Decreased Business Revenue; Increased Property Values (Rapidly escalating property values and taxes); Increased Regulatory Costs

Social: Increased Employment (generated 1,800 jobs); No Impact on Crime.

9. Adams, G. R., Sullivan, A.-M., Horton, K. D., Menna, R. and Guilmette, A. M. (2007). A study of differences in Canadian university students' gambling and proximity to a casino. *Journal of Gambling Issues*, 19.

*Gambling behavior and problem gambling of college students were investigated in universities far from and close to a large casino. A survey of 17 gambling activities was given and the South Oaks Gambling Screen was completed by 1579 students. Approximately half of the students were enrolled in universities near a casino and the other half far from a major casino. Gender and proximity differences were hypothesized and observed. Males engaged in more gambling activities than females. Students close to a casino manifested more serious problem gambling than students far from a casino. Gender by proximity interactions are reported. This investigation supports the idea that*

context and proximity to gaming venues may have exposure or accessibility effects on university students' gambling behavior.

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Canada -- Ontario

**Years Impacts Examined:** 2001-2002

**Impacts:** Social: Increase in Problem Gambling (rates of problem gambling higher for students with closer proximity to a casino)

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10. Adams, P. (2004). *Gambling Impact Assessment: For Auckland City Council, Manukau City Council, North Shore City Council, Waitakere City Council, Franklin District Council, Papakura District Council, and Rodney District Council: Part two: Waitakere City data*. Auckland, New Zealand: Centre for Gambling Studies.

*The following report was commissioned by the seven territorial authorities within the Auckland region to inform the development of their local gambling venue policies required by the recently passed Gambling Act 2003. Under this new Act, territorial authorities have specific responsibilities in relation to consents for "Class 4" gambling venues, i.e. local venues providing either electronic gambling machines (EGMs) or race or sports betting. Prior to drafting their gambling venue policies, the Act requires territorial authorities to conduct an assessment of the social impacts of gambling on their communities. The current sub-report (Part 2) collates information pertaining to the Waitakere City district alone. This information was collected from available sources over a six week period in November and December 2003. It collates information from databases on population characteristics, the allocation of community benefit funds by the six main EGM trusts, and trends in help-seeking for problem gambling within the district. It also summarises feedback from a workshop that sought public views on the future role of the Waitakere City Council with respect to Class 4 gambling.*

**Type:** Secondary Analysis

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** New Zealand -- Waitakere City

**Years Impacts Examined:** 1997-2003

**Impacts:** Economic: Increased Public Services (analysis of grants by the six main national trusts suggest that of the \$5.3 million they distributed as community benefit funds from EGM gambling)

Social: Increased Problem Gambling and Related Indices (85% of first time callers to the Gambling Problem Helpline identified EGMs as their primary mode of gambling)

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11. Adams, P. J. (2004). Minimising the impact of gambling in the subtle degradation of democratic systems. *Journal of Gambling Issues*, 11.

*Gambling can harm a society's social and economic systems and negatively affect its political ecology. If not protected, democratic processes and institutions in jurisdictions with high levels of gambling are likely to undergo a progressive, cumulative degradation of function. These subtle, diffuse distortions result when a broad variety of individuals, working in isolation and reacting to pressures from gambling providers, incrementally compromise their roles and responsibilities. This article examines how these degradations can occur for people working in universities, government departments, media outlets, politics, and community organisations. It argues that any strategy to minimise harm from gambling should include explicit measures to protect the public from such distortions to democratic processes. The single most effective way to do this is to independently monitor people with public duties who have relationships to the beneficiaries of gambling consumption. The article concludes by proposing an international charter that sets benchmark standards for protecting a society from such degradations.*

**Type:** Original Research; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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12. Adams, P., Rossen, F., Perese, L., Townsend, S., Brown, R., Brown, P. and Garland, J. (2004). *Gambling impact assessment for seven Auckland territorial authorities*. Auckland, New Zealand: Centre for Gambling Studies, University of Auckland.

*The following report was commissioned by the seven territorial authorities within the Auckland region to inform the development of their local gambling venue policies required by the recently passed Gambling Act 2003. Under this new Act territorial authorities have specific responsibilities in relation to consents for "Class 4" gambling venues, i.e. local venues providing either electronic gambling machines (EGMs) or race or sports betting. Prior to drafting their gambling venue policies, the Act requires territorial authorities to conduct an assessment of the social impacts of gambling on their communities. The report acknowledges the absence of organised systems for territorial authorities to monitor gambling behaviour and its impact within their districts. Using the best available information, a data collection framework has been constructed that identifies key indicators broken into social, economic, cultural and environmental impacts. Since the processes for collecting information for these indicators have yet to be developed, it is anticipated that this framework could provide a base for territorial authorities in future community impact assessment. The report sets out to collect information from sources that are currently available. It summarises local and international literature on the impact of gambling on communities. It collates information from databases on population characteristics, the allocation of community benefit funds by the six main "National Gambling Machine Trusts" (NGMTs), and trends in help-seeking for problem gambling within each territorial authority district. It also summarises a series of stakeholder workshops, which sought public views on the future role of territorial authorities with respect to Class 4 gambling.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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13. Agence de la santé et des services sociaux des Laurentides (2006). Avis de santé publique sur les impacts de l'implantation des salons de jeux au Québec : Région des Laurentides.

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Quebec

**Years Impacts Examined:** 2003-2007

**Impacts:** Social: Increased Problem Gambling and Related Indices (En 2005, on estimait à 10,7 % la proportion de Québécois jouant aux appareils de loterie vidéo (ALV) ce qui correspond, en théorie, à environ 42 000 citoyens des Laurentides de 18 ans et plus.)

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14. Alain, M., Dessureault, D. and Brunelle, N. (n.d.). *Le salon de jeu de Trois-Rivières: Impacts et opinions.*

**GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Quebec

**Years Impacts Examined:** 2007-2008

**Impacts:** Social: No Impact on Crime; No Impact on Problem Gambling

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15. Alain, M., Dessureault, D., Brunelle, N., Crête, C. and Arseneault, Y. (n.d.). *Mesure des impacts socioéconomiques d'une nouvelle offre légale de jeu de hasard: Un suivi longitudinal de l'implantation du Ludoplex à Trois-Rivières: Sondage pré-implantation du Ludoplex: Perceptions et habitudes de jeu.*

*This is part of the same study as above, with the present study just looking at people's perceptions of potential impacts.*

**GOOD QUALITY** (Hard to determine as report in French)

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Quebec -- Trois-Rivières

**Years Impacts Examined:** 2007

**Impacts:** N/A

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16. Alan, M. (2010). *Economic and social impact of introducing casino gambling: a review and assessment of the literature*, Federal Reserve Bank of Philadelphia.

*Reviews and assesses the existing literature on the potential economic impact of introducing casino gambling into a community or region, first by discussing the casinos' effect on economic activity and growth within a community or region, and then by exploring their effect on government revenues. Also discusses the literature related to the economic impact of social costs widely associated with gambling, such as increases in crime, bankruptcy, and problem gambling.*

**Type:** Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States - Pennsylvania

**Years Impacts Examined:** N/A

**Impacts:** N/A

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17. Albanese, J. (2008). White collar crimes and casino gambling: Looking for empirical links to forgery, embezzlement, and fraud. *Crime, Law and Social Change*, 49(5), 333-347.

*This study investigates the alleged link between casino gambling and arrests for the commission of the "white*

collar" crimes of forgery, fraud, and embezzlement. The rapid expansion of casino gaming venues in recent years has been said to have increased the incidence of white collar crimes by casino customers who get themselves in financial trouble by overspending at casinos (given the median age of 47 for casino patrons and that 41% hold white collar jobs). This study investigates this question by using several kinds of data to examine arrest and offender trends, using a follow-up period of up to 10 years to assess long-term impacts. The results indicate that, comparing pre- and post-casino average annual arrests for embezzlement, forgery, and fraud, trends show a general decrease in arrests in casino jurisdictions, although embezzlement arrests rose in Connecticut and in nationwide statistics. An assessment of the reasons offered from interviews with people convicted of embezzlement and fraud are presented to examine the extent to which gambling is a causal factor.

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1988-2005

**Impacts:** Social: Change in Crime (a general decrease in arrests in casino jurisdictions, although embezzlement arrests rose in Connecticut and in nationwide statistics)

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18. Alcohol and Gaming Authority (1999). *Annual Gaming Report 1998-1999 Volume 1*. Dartmouth, NS: Alcohol and Gaming Authority.

*This report is divided into six chapters. In the Introduction (Chapter 1), the reader is provided with an overview of the past year, information about the Province's gaming industry and about the Authority. This chapter also includes a progress report on the status of recommendations included in the Authority's 1997/98 Annual Report. Chapter 2 provides a financial breakdown of the business of gaming, including an analysis of each type of legal activity in Nova Scotia. In Chapters 3 and 4, the Authority gets to the heart of its research mandate; presenting an analysis of studies assessing the public's interests, attitudes and reactions to gaming activities in the Province and assessments of the social, health, justice, economic and environmental effects of gaming in Nova Scotia, respectively. Chapter 5 contains an overview of gaming trends in other jurisdictions and of issues impacting on the industry. Chapter 6 sets out the recommendations resulting from the Authority's observations this year.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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19. Alexander, R. C. (2002). *The effects of casino gaming on selected midwestern municipalities*. Ann Arbor, MI: Northern Illinois University. Ph.D.

*Most scholars examining the effects of legalized casino gambling on municipalities, either riverboat or Native-American, contend that the social costs and negative economic consequences of gaming outweigh any financial or economic benefits that host communities reap. This research project challenges this prevailing paradigm and asserts that legalized casino gaming has been and will continue to be a viable economic development initiative for the communities examined here and others possessing similar economic and demographic conditions. This project gauges the opinions of professional public administrators and economic development professionals who have been largely neglected by the majority of scholars examining this subject. Their insight is especially valuable because they are among the most qualified to comment upon the economic development environment goals of their respective communities and level of citizen support for this controversial industry. Scores of local government*



*officials, local business executives, and civic leaders in 34 communities in seven midwestern states were surveyed and interviewed to collect opinions regarding the effects that legalized gaming has had upon their respective communities. The vast majority of respondents overwhelmingly contend that legalized gaming is an industry that has produced tremendous amounts of revenue, created thousands of jobs, spurred secondary development, bolstered existing businesses, and allowed the their communities to undertake large-scale projects that would formerly have been fiscally impossible.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Illinois

United States -- Iowa

United States -- Indiana

United States -- Minnesota

United States -- Michigan

United States -- Missouri

United States -- Wisconsin

**Years Impacts Examined:** 2001-2002

**Impacts:** Social: Increase in Positive Attitudes (local government officials, business leaders, etc. were generally positive); No Impact on Crime (no effect according to Chiefs of Police)

20. Alexander, R. C. and Paterline, B. A. (2005). Boom or bust? Casino gaming and host municipalities. *International Social Science Review*, 80(1/2), 20-28.

*This article presents a study conducted in the U.S. to examine the impact of gaming on municipalities that possess it. The authors of this study have surveyed those officials in host communities who may not be best qualified to comment upon the overall impact of gaming on the municipal economy, but who do possess unique insight into the economic health and priorities of their respective communities. The survey focused on these officials because they are uniquely qualified to comment upon the overall economic health, direction, and priorities of their communities with a modicum of professionalism and accuracy. Of the 140 municipalities surveyed, 49.6 percent possessed a Native-American casino development. Municipalities received a mean of \$7.7 million annually from gaming. The median for this variable was \$6 million, with a standard deviation of \$6.5 million.*

**Type:** Original Research

**Gambling Format:** Casinos; Indian Gaming

**Location(s):** United States

**Years Impacts Examined:** 2004?

**Impacts:** Social: Increased Positive Attitudes (3/4 of local government officials, business leaders positive or very positive)

21. Allen Consulting Group (2004). *Final report on issues related to commonwealth interactive gambling regulation: Report for the Department of Communications, Information Technology and the Arts.* Melbourne, Australia: Allen Consulting Group.

*The Interactive Gambling Act 2001 requires that before 1 July 2003 the Minister for Communications, Information Technology and the Arts must cause to be conducted a review of interactive gambling in Australia. As part of that review, the Department of Communications, Information Technology and the Arts (the department) engaged The Allen Consulting Group to provide research, analysis and other supporting material for four tasks. Task One — a*

quantitative and qualitative assessment of the nature, size and projected growth of interactive gambling services both in Australia and overseas, focusing on the impact of the Interactive Gambling Act, changes in the accessibility of such services, and the incidence of service use. Task Two — an assessment of the social and commercial impacts of interactive gambling services, including the impacts of the Interactive Gambling Act on users, providers of interactive gambling services, and the broader community. Task Three — an analysis of technological developments relevant to the regulation of interactive gambling services and how those developments can assist in dealing with problem gambling. Task Four — an assessment of the feasibility of regulating financial transactions associated with the provision of interactive gambling services, along with the capacity to undertake such regulation.

#### **GOOD QUALITY**

**Type:** Original Research

**Gambling Format:** Internet

**Location(s):** Australia

**Years Impacts Examined:** 2002-2003

**Impacts:** Economic: Increased Government Revenue; Increased Regulatory Costs; Increased Infrastructure Investment (telecommunications); Change in Business Revenue (expenditure diversion from other gambling, also non-gambling substitutions).

Social: No Impact on Problem Gambling and Related Indices (impacts no greater than traditional gambling)

22. Anders, G. C. (1996). Native American casino gambling in Arizona: A case study of the Fort McDowell reservation. *Journal of Gambling Studies*, 12(3), 253-267.

*Since Congress passed the American Indian Gambling Regulatory Act (IGRA) in 1988, there has been an explosion in the number of gambling casinos located on Native American reservations. It is estimated that in 1994 the total net revenue from 81 Native American casinos exceeded \$2.3 billion dollars. As the number of Native American casinos grows along with the volume of gambling activity, opposition increases from states, the established gambling industry hurt by lost revenues, and groups with moral objections to gambling. This article reports on an effort to measure the economic impact of the Fort McDowell casino located near Phoenix, Arizona. The article discusses the casino's history and current operations. Next, it explains the use of an input-output model to compute the impact of casino's income and employment effects on the economy of Maricopa County. It is estimated that the casino is responsible for 2,483 new jobs, and an increase of approximately \$80.35 million in regional output. Additional information is necessary to more accurately assess both the benefits and costs of the casino. Unfortunately, subsequent efforts to collect additional data have been unsuccessful. The conclusion discusses why, and raises questions regarding Native American gaming.*

**Type:** Original Research; Methodological Issues

**Gambling Format:** Indian Gaming-- Casinos

**Location(s):** United States -- Arizona -- Maricopa County

**Years Impacts Examined:** 1993

**Impacts:** Economic: Increased Public Services; Increased Infrastructure Value (construction, wholesale and retail sales, services, utilities, finance, real-estate, and transportation); Increase in Business Revenue (increase due to increase in household incomes; net revenues from the gaming operations are divided - 30% is allocated for tribal government operations, 30% is used for economic development projects; and 34% is paid directly to tribal members.)

Social: Increased Employment (casino is responsible for 2,483 new jobs though possibly at the expense of other sectors; 940 full-time employees at casino itself)

23. Anders, G. C. (1998). Indian gaming: Financial and regulatory issues. *Annals of the American Academy of Political and Social Science*, 556, 98-108.

*For 124 Indian tribes, casino gaming has become an important source of revenue as a result of the Indian Gaming Regulatory Act (IGRA) of 1988. This article reviews the judicial and legislative history of Indian gaming. Second, it examines regulation and oversight of Indian gaming. Next, it provides examples of the uses of gaming revenue. Then it considers the positive and negative impacts of casinos on Indian communities, local businesses, and states. Finally, it discusses the conflict over the sovereignty of Indian tribes as it relates to amending IGRA.*

**Type:** Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States

**Years Impacts Examined:** N/A

**Impacts:** N/A

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24. Anders, G. C. (2002). Reconsidering the economic impact of Indian casino gambling. *The economics of gambling*. Williams, L. V. London, Routledge, 204-223.

*This chapter presents the results of regression analyses that confirm the displacement effects of casinos by economic sector. An attempt is made to extrapolate the economic impact of casino enlargement on local government using the number of slot machines as a measure of gambling activity on an anticipated loss in tax revenue.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- Arizona

**Years Impacts Examined:** 1992-2000

**Impacts:** Economic: Change in Government Revenue (Diversion of State tax revenue)

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25. Anders, G. C., Siegel, D. and Yacoub, M. (1998). Does Indian casino gambling reduce state revenues? Evidence from Arizona. *Contemporary Economic Policy*, 16(3), 347-355.

*Critics of Indian gaming contend that reservation casinos have a negative impact on state economies. The hypothesis that the introduction of Indian casinos caused a structural change in the formation of Arizona state revenues is tested. Data are from Maricopa County, the largest county in Arizona. Findings suggest that Indian casinos may divert funds from taxable to non-taxable sectors. The growth in tax revenue from non-gaming sectors of the economy has masked these displacement effects. However, given the trend toward increasing the proportion of state funds from sales taxes, a diminution in the rate of economic growth could have serious implications for future state budgets.*

**Type:** Secondary Research

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- Arizona -- Maricopa County

**Years Impacts Examined:** 1990-1996

**Impacts:** Economic: Decreased Government Revenue (decline in State tax revenue); Changes in Business Revenue

(revenue displacement)

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26. Anderson Economic Group (2003). *Market and economic impacts of a tribal casino in Wayland Township, Michigan*. Lansing, MI: Anderson Economic Group.

*Anderson Economic Group undertook an assessment of the impact that a proposed tribal casino in Wayland Township would have on Michigan's economy. This study complements our critical review of the economic impact study submitted to the Bureau of Indian Affairs (BIA) by the Match-E-Be-Nash-She-Wish Tribe, also known as the Gun Lake Band of Potawatomi Indians. This report, commissioned by the Grand Rapids Area Chamber of Commerce, is intended to provide a realistic look at the economic impact of the casino. Anderson Economic Group limits its analysis to the economic and market issues involved with the development of the subject casino. We refrain from taking a side for or against casino development or gaming. Our analysis can be broken into two main parts. First, we begin by assessing the market for the Wayland Township Casino that the Gun Lake Band proposes. Then, we produce an economic model to simulate the impacts of the casino operations.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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27. Anderson, R. (2008). *Essays on the economic effects of tribal gaming*: University of Washington. Ph.D Thesis.

*The Indian Gaming Regulatory Act provides a statutory framework for tribal gaming and stipulates that net gaming revenues must be used by tribes to foster economic development. After it was passed in 1988, tribal gaming revenues increased dramatically as did the number of tribal casinos. Using a difference-in-difference methodology with 1990 and 2000 Census data, I examine how the introductions of casinos impact the well-being of on reservation American Indians. In my first two chapters, I use aggregate reservation data. In Chapter 1, I use least squares. Casinos increase per capita income by about 8% and reduce family and child poverty rates by 4 to 5 percentage points. I find the largest casinos are associated with the largest increases in income and reductions in poverty. However, least squares will only be unbiased if the decision to open a casino is uncorrelated with unobservable heterogeneity in reservation per capita income or poverty. In Chapter 2, I control for this potential endogeneity of the casino choice variables by including instrumental variables and find income effects increase 2 to 4% but lose statistical significance. Poverty effects increase in magnitude to 11 to 14 percentage points for family poverty rates and 16 to 20 percentage points for child poverty rates. Hence, these results may mean tribes with fewer outside opportunities open casinos and least squares biases effects downwards. However, after dropping at least one instrument, there are problems with weak identification, income effects decline to almost zero, and poverty impacts are no longer significant but remain large in magnitude. In Chapter 3, I use 1990 and 2000 IPUMS-USA micro-data to examine impacts on household per capita total income, earned income, state and federal assistance income, and poverty according to head of household skill and market size. Casinos impacts are largest on low-skill heads but significance is dependent on the model used. If impacts vary by market size, income effects differ on the measure used and the sex of the head of household. On the other hand, with the exception of female headed families' near poverty rates, poverty rates decline more in larger markets.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States

**Years Impacts Examined:** 1990; 2000

**Impacts:** Economic: Increase Personal Income (Casinos increase per capita income by about 8% and reduce family and child poverty rates by 4 to 5 percentage points)

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28. Andrews, C. (2007). *Fiscal impact of American Indian gaming on non-Indian local governments*. United States -- Missouri: University of Missouri - Saint Louis. Ph.D.

*Intense growth in American Indian gaming over the past two and a half decades has resulted in suggestions of impact on non-Indian communities with a resulting growth in tribal-local government interaction. Although there is mounting evidence of both positive and negative socio-economic impacts on non-Indian communities as a result of Indian gaming operations, to date, there has been very little exploration of the actual fiscal impact on non-Indian governments as a result of these operations. This thesis serves to examine this impact. This study uses a combination of an extensive literature review, tribal-local government survey, GIS techniques and a quantitative examination of data ranging from casino factors to the Census of Governments to explore this topic. The primary method of this examination includes a longitudinal difference in difference model looking at the impact of the opening of an American Indian gaming operation between the years of 1983 and 1997 on non-Indian government revenues and expenditures within a 50 mile radius of the operation. The results of this research indicate that at an aggregate level there is no significant correlation between revenues and/or expenditures in non-Indian governments (within a 50 mile radius of an American Indian gaming operation) and the opening of American Indian gaming operation. There is, however, evidence to support increased sales and property taxes as well as decreased local welfare expenditures correlated to the opening of an American Indian gaming operation. The model also demonstrates a correlation between the opening of an American Indian gaming operation and decreased State intergovernmental revenue transfers.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming—All Gambling

**Location(s):** United States

**Years Impacts Examined:** 1983-1997

**Impacts:** Economic: Increased Government Revenues (evidence to support increased sales and property taxes); Increased Personal Income (decreased local welfare expenditures correlated to the opening of an American Indian gaming operation in non-Indian governments within a 50 mile radius of an American Indian gaming operation); No Impact on Business Revenue (no significant correlation between revenues and/or expenditures in non-Indian governments within a 50 mile radius of an American Indian gaming operation and the opening of American Indian gaming operation.)

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29. Anglin, A. A. (2001). *The perceived impact of casino revenues on a local school district*. United States -- Mississippi: Mississippi State University. Ed.D. Thesis.

*The purpose of this study was to survey the opinions of selected school personnel and selected community members concerning the perceived impact of casino revenues on public education in the Gulfport School District in Mississippi. This case study investigation was guided by three research questions. These questions were: What are the opinions of selected school personnel concerning the impact of casino revenues on education in the Gulfport School District? What are the opinions of selected community members concerning the impact of casino revenues on education in the Gulfport School District? What are commonalities and differences in opinions between the school personnel group and the community members concerning the impact of casino revenues on education in the Gulfport School District? A summary of conclusions reached from the research included: (a) responses of participants from each group were based on their perspective related to their roles in the school district or the community, their knowledge of casinos and the casino revenues that have impacted education in the school district, and their personal biases; (b) there appears to be an association between legalized gambling which has occurred*

since the location of casinos on the Mississippi Gulf Coast and the phenomenal demographic, economic, and educational changes which the area has experienced; (c) the community involvement of the casino management and the economic success of the community associated with the success of the casinos have served to allay many of the fears of local residents about what the casino presence would do to their community; and (d) on the whole, or overall, the perceived benefits of casinos were viewed as outweighing the perceived costs of casinos by a majority of those involved in the study. This study confirms the need for further research into the impact of casino revenues on public education in Mississippi school districts where casinos are located.

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Mississippi -- Gulfport

**Years Impacts Examined:** 1998?

**Impacts:** Social: Increased Positive Attitudes (majority indicated that the perceived benefits outweighed the perceived costs as related to the impact of casinos revenues on education)

30. Anielski, M. and Braaten, A. (2008). *The Socio-Economic Impact of Gambling (SEIG) framework: An assessment framework for Canada: In search of the gold standard*. Anielski Management. Edmonton, Alberta. February 2008.

*This report deals with the question of what is the best method to measure the social and economic impact of legalized gambling in an early 21st Century society. The specific impact referred to is one that touches the individual gambler, the family or household, and the community, region or province.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

31. Anielski, M. & Wynne, H. (2009). *Socio-economic impact study of gambling in Nova Scotia*. Anielski Management. Edmonton, Alberta. June 22, 2009.

**Type:** Original Research

**Gambling Format:** All gambling formats.

**Location(s):** Canada – Nova Scotia

**Years Impacts Examined:** 2001 - 2007

32. Arthur Anderson (1997). *Economic impacts of casino gaming in the United States*. Washington, D.C.: American Gaming Association.

*The Arthur Anderson accounting firm was engaged by the American Gaming Association to prepare a report which examines the economic impacts of casino gaming on the economy of the United States. Casino gaming, in this study, is defined as all gaming activity which occurs in fully licensed casino facilities, including land-based, dockside and riverboat establishments. Native American casinos, cruise ship casinos and certain non-casino slot machines have not been considered in this study. The study does not address the increase in costs for such things as*

*infrastructure improvements and law enforcement. In addition, this study makes no attempt to analyze the socioeconomic effects of casino gaming. In the micro study, three geographically-separate areas were selected, all newer gaming jurisdictions, in order to examine the local micro-economic impacts arising from the introduction of casino gaming. The areas chosen for evaluation were Shreveport/Bossier City, La; Biloxi/Gulfport, Miss.; and Joliet, Illinois.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

United States -- Louisiana -- Shreveport

United States -- Mississippi -- Biloxi

United States -- Illinois -- Joliet

**Years Impacts Examined:** 1980-1994

**Impacts:** Economic: Increased Government Revenue (portion of casino gross revenues are paid in state and local taxes; on average for the three areas studied, the tax-to-wage ratio was 60 cents paid in state and local taxes for every \$1 paid in wages.); Increased Public Services (improved using funding from gaming tax revenues); Increased Infrastructure Value (increase in commercial construction permits and value); Increased Infrastructure Costs (costs not assessed but acknowledgement of an increase), Increased Business Starts & Increased Business Failures; Increased Business Revenue (introduction of casinos leads to growth in almost all other areas: retail sales, commercial and housing construction, restaurants, etc.)

Social: Increased Employment (All three jurisdictions saw the creation of thousands of good-paying new jobs; number of people on public assistance drops significantly)

33. Australia Productivity Commission, Banks, G. and Fitzgerald, R. (1999). *Australia's gambling industries inquiry report*. Melbourne: Productivity Commission.

*In its terms of reference, the Commission was asked to report on the performance of the gambling industries and their economic and social impacts across Australia, including their impact on the retail, tourism and entertainment industries, and on Commonwealth and State/Territory Budgets. See Chapter 11. "Gauging the net impacts". Also, see the Summary document.*

#### EXCELLENT QUALITY

**Type:** Original Research; Methodological Issues

**Gambling Format:** All Gambling (See Table 11.2 "Measured consumer benefits, social costs and net impacts of gambling, by mode of gambling")

**Location(s):** Australia

**Years Impacts Examined:** To 1999

**Impacts:** Economic: Change in Business Revenue (Net gains in jobs and economic activity are small when account is taken of the impact on other industries of the diversion of consumer spending to gambling)

Social: Changed Leisure Activity (The main source of national benefit from the liberalisation of gambling has been the consumer gains from access to a service that gives people enjoyment); Change in Employment (Net gains in jobs and economic activity are small when account is taken of the impact on other industries of the diversion of consumer spending to gambling)

34. Australian Institute for Gambling Research (1995). *Report of the first year of the study into the social and economic impact of the introduction of gaming machines to Queensland clubs and hotels*. Brisbane, Australia: Queensland Department of Families, Youth and Community Care

*The Gaming Machine Act 1991 allowed, for the first time, the operation of gaming machines in Queensland clubs and hotels. The first machines commenced operation in clubs in February 1992 and in hotels in April of the same year. This study was commissioned by the Minister for Family Services and Aboriginal and Islander Affairs in April 1993. Its central aim is to provide a means to assess the positive and negative aspects of the introduction of machine gaming to Queensland clubs and hotels, and thus to inform policy formulation.*

#### **GOOD QUALITY**

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- Queensland

**Years Impacts Examined:** 1992-1994

**Impacts:** Economic: Increased Government Revenue (taxation revenue exceeding any loss of revenue from a decline in other forms of gambling and any additional costs incurred by the state in administering the machines); Increased Infrastructure Value (clubs reported \$60 million worth of building projects or facility improvements completed or in progress, and a further \$165 worth planned); No Impact on Business Starts (hotels); No Impact on Business Failures (hotels)

Social: Increased Employment (gross increase of approximately 2 000 in clubs and hotels and an equivalent number in ancillary employment between 1992 and 1994; significant regional impact); Increased Positive Attitudes (favourable; 50% of respondents from a random sample agreeing that machines had benefited the community); Increased Problem Gambling (problems experienced by the small proportion of the population which accounts for the majority of expenditure)

35. Australian Institute for Gambling Research and Labour and Industry Research Unit (1996). *Problem gambling and criminal behaviour in Queensland: A report of the second year of the study into the social and economic impact of the introduction of gaming machines to Queensland clubs and hotels* Queensland Department of Families, Youth and Community Care.

*This report forms part of the output of the second year of the three-year Study into the Social and Economic Impact of the Introduction of Gaming Machines to Queensland Clubs and Hotels. The general aim of the research is to examine the role of gambling in general (and machine gaming in particular) in contributing to criminal activity. More specifically: to what extent are those who play machines, and especially those who play them heavily, likely to find themselves in financial difficulties which lead them to commit offences as a means to obtain funds?*

**Type:** Original Research

**Gambling Format:** All Gambling

**Location(s):** Australia -- Queensland

**Years Impacts Examined:** 1995

**Impacts:** Social: Increased Crime (to support habit or pay associated debts; causality complex)

36. Azmier, J. J., Kelley, R. and Todosichuk, P. (2001). *Triumph, tragedy or trade-off? Considering the impact of gambling*. Calgary, AB: Canada West Foundation.

*Building on the efforts of the Whistler Symposium, Canada West launched a research initiative to serve two purposes: (1) to explain and illustrate the methodological problems in developing a measure of gambling's impact; and (2) to propose a potential means of calculating gambling's impact. Over the course of the research, however, it became clear that in the absence of some consensus on the many methodological issues, it is not possible to*



*evaluate gambling's impact. Simply put, until it is understood what the impacts of gambling's expansion are, it is not possible to begin to weigh them against each other. As a result, this report will focus on the current state of economic research into gambling's impact, and will conclude with some proposals to overcome research barriers. It is hoped that by doing so, another step forward will be taken towards providing a means of assessing the impact of gambling.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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37. Back, K.-J. and Lee, C.-K. (2005). Residents' perceptions of casino development in Korea: The Kangwon Land Casino case. *UNLV Gaming Research & Review Journal*, 9(2), 45-53.

*This study was developed to examine the underlying relationships among the sociodemographic variables of casino community residents, the perceptions of potential benefits and costs, and the support for casino development based on the social exchange theory. The results show that social and economic benefits were most significant in determining the level of support for casino development. None of the demographic variables significantly affected support level. Based on the results of this study, casino operators and policymakers should make efforts to minimize the negative social factors and maximize social and economic benefits if they want support from residents for further development of casino businesses.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Korea -- Kangwon Province

**Years Impacts Examined:** 2003

**Impacts:** N/A

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38. Bangsund, D. A. and Leistritz, F.L. (1997). *Casinos in the Upper Midwest: A discussion of the impacts*. Fargo, ND: Department of Agricultural Economics, North Dakota State University.

*This study reviewed existing literature on the effects of casino gaming in the Upper Midwest and discussed some of the issues associated with casino gaming.*

**Type:** Secondary Analysis

**Gambling Format:** Casinos; Indian Gaming -- Casinos

**Location(s):** United States -- Minnesota

United States -- Wisconsin

United States -- North Dakota

United States -- South Dakota

**Years Impacts Examined:** 1988-1996

**Impacts:** N/A

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39. Banks, G. (2002). *The Productivity Commission's gambling inquiry: 3 years on. Presentation to the 12th Annual*

Conference of the National Association for Gambling Studies, Melbourne, 21 November 2002. Melbourne: Productivity Commission, Canberra.

*This paper is an edited version of my address to the 12th Annual Conference of the National Association for Gambling Studies, on 21 November in Melbourne. It is being reproduced in 'hard copy' following requests for it to be made more accessible. The paper responds to the coincident timing of the NAGS conference with the third anniversary of the Commission's report on Australia's Gambling Industries, by reflecting on key developments since then. It considers how the Commission's assessment of the extent and impacts of problem gambling has stood up, examines trends in gambling expenditure, and how effective government and industry responses to problem gambling have been. The paper concludes by identifying some policy development and regulatory issues that need priority attention.*

**Type:** Secondary Analysis

**Gambling Format:** All Gambling

**Location(s):** Australia

**Years Impacts Examined:** N/A

**Impacts:** N/A

40. Barretta, T. C. (2004). *The direct, induced, and external costs and benefits of legalized casino gambling*. United States -- Connecticut: Quinnipiac University. M.B.A.

*Throughout U.S history, local governments have either allowed, encouraged, or banned gambling as they saw fit with the changing economic times and dynamic socio-culture. The move by Nevada state legislature to legalize gaming in 1931 began the of the nation-wide casino craze. The \$60 billion U.S. gambling industry, today, includes casinos and gambling resorts, lottery commissions, gambling equipment makers, and service providers. Gambling accounts for nearly 10 percent of all leisure expenditures and is one of the fastest growing sectors of the economy. While the enormous tax revenues and employment opportunities generated by legalized gambling are attractive to a state legislature, there are extensive socioeconomic costs associated with casino gambling. These include increased rates of crime, gambling addiction costs, decreased property values, increased administration costs, issues of morality, and substitution effects on local businesses. The socioeconomic costs, benefits, and ultimate impact of casino gambling to an economy depends on whether the environment is of a destination resort, an urban casino, or simply legalized, widespread gaming devices. Despite discrepancies in methodology, data, and conclusions; consensus among researchers indicates a benefit-cost analysis is necessary to evaluate casinos' impact. A review of current benefit-cost analysis studies in the industry reveals numerous inconsistencies. Much debate exists and the results of current studies depends, largely, by whom funds the study. But, upon careful review, the overwhelming body of research, indicates legalized gambling to impose more costs than any perceived benefit. In fact, tabulation of all external costs borne by society, proves the cost exceed the benefits of gambling by a ratio of two-to-one.*

**Type:** Methodological Issues

**Gambling Format:** Casinos; Indian Gaming

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

41. Barron, J. M., Staten, M. E. and Wilshusen, S. M. (2002). The impact of casino gambling on personal bankruptcy filing rates. *Contemporary Economic Policy*, 20(4), 440-455.

*Personal bankruptcies soared in the United States between 1994 and 1998. One activity that can precipitate personal financial crises and that has also experienced dramatic growth is commercial gambling, especially casino gambling. This article builds a simple model of bankruptcy choice and empirically tests the model using unique county-level data on debt, income, household age, population density, and casino gambling as well as state measures of employment and marital stability, health insurance coverage, and garnishment restrictions. The authors find that the proximity of casino gambling appears to be associated with higher bankruptcy rates, but that the local impact is far more pronounced than the influence of casino gambling on the national filing rate. To quantify the magnitude of the impact, the analysis predicts over a 5% decline in 1998 filing rates for counties surrounding a casino, and a 1% decline in the nationwide filing rate if one were to eliminate casino gambling. Consequently, although casino gambling causes important local effects, nationwide the incidence and growth of casino gambling does not explain much of the rise in bankruptcies during the past decade.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1993-1999

**Impacts:** Social: Increased Problem Gambling (bankruptcies at county level; lesser influence nationwide)

42. Barthe, E. and Stitt, B. (2009). Temporal distributions of crime and disorder in casino and non-casino zones. *Journal of Gambling Studies*, 25(2), 139-152.

*Research on the relationship between casinos and crime has yielded mixed conclusions. Some authors argue that casinos are crime attractors and provide fertile grounds for disorder in the surrounding communities. Others claim that the impact of casinos on the crime problem has been over-stated and that casinos in themselves are not crime generators. Relying on calls for service and incidents known to the police, this research reveals the specific spatial and temporal characteristics of all criminal and disorderly behaviors around casino venues. (PsycINFO Database Record (c) 2009 APA, all rights reserved) (journal abstract).*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Nevada -- Reno

**Years Impacts Examined:** 2007?

**Impacts:** Social: Crime (In most cases, such as differences between casino and non-casino jurisdictions in violent crime calls for service and incident reports could be attributed to the 24-h culture of casino venues.)

43. Basham, P. and White, K. (2002). *Gambling with our future? The costs and benefits of legalized gambling*. Vancouver, BC: Fraser Institute.

*Heightened public awareness of, and participation in, gambling has sparked considerable debate about its economic viability and its overall effect on society. The fundamental policy question addressed in this report is whether or not the benefits of legalized gambling outweigh the costs? In addition to a socioeconomic analysis, this report discusses what the appropriate role of government should be in regard to gambling. Currently, municipal, provincial, state, and federal governments in North America perform a number of roles, including prohibitor, provider (sometimes monopolistically), regulator, and educator. Finally, this report concludes by addressing the important, yet commonly unspoken, issue of individual freedom, that is, the right to choose whether or not to gamble and on what terms, in the face of government's increasingly paternalistic attitude. In this report, we*

*explicitly take a wide view, literally and figuratively, of the ramifications of legalized gambling. We investigate legalized gambling in four countries: Canada, the United States, Australia, and the United Kingdom.*

**Type:** Secondary Analysis

**Gambling Format:** All Gambling

**Location(s):** Canada

United States

United Kingdom

Australia

**Years Impacts Examined:** N/A

**Impacts:** N/A

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44. Basu, A. (2003). *The economic implications of VLT venue selection on Maryland's horse racing industry*. Baltimore, MD: Optimal Solutions Group.

*Using an Implan input-output model, Optimal Solutions Group, LLC (OSG)<sup>1</sup> developed estimates of economic impact across three scenarios.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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45. Baxandall, P. and Sacerdote, B. (2005). *The casino gamble in Massachusetts*. Cambridge, MA: Rappaport Institute for Greater Boston, John F. Kennedy School of Economics, Harvard University.

*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 — which compares the experience of counties in the United States that house casinos with those that do not — suggests that both sides are wrong. Instead, the introduction of a casino does appear to produce a few modestly positive effects, a few modestly negative impacts, and, in several areas, no statistically significant effects at all.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Indian Gaming

**Location(s):** United States

**Years Impacts Examined:** 1980-2005?

**Impacts:** Economic: No Impact on Government Revenue; No Impact on Infrastructure Costs; Increased Property Value (limited positive effect)

Social: No Impact on Employment; No Impact on Crime; Increased Problem Gambling (bankruptcies - modest increase)

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46. Baxandall, P. and Sacerdote, B. (2005). *Betting on the Future: The Economic Impact of Legalized Gambling. Policy Brief*. Cambridge, MA: Rappaport Institute for Greater Boston.

*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 - which compares the experience of counties in the United States that house casinos with those that do not - suggests that both sides are wrong. Instead, the introduction of a casino appears to produce a few modestly positive effects, a few modestly negative impacts, and, in several areas, no statistically significant effects at all.*

**Type:** Original Research; Secondary Analysis (This is a more concise version of previously described Baxandall study)

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

47. Beckert, J. and Lutter, M. (2009). The inequality of fair play: Lottery gambling and social stratification in Germany. *European Sociological Review*, 25(4), 475-488.

*On the basis of a telephone survey conducted on a random sample of the German residential population, we examine the distribution effects state lotteries have on Germany's social structure. Lotteries are highly taxed economic transactions, whose proceeds make up a considerable share of public fiscal revenues. Our analysis shows that lotteries are a form of regressive taxation. Using key demographic indicators, such as age, citizenship, and levels of income and education, we demonstrate the effects of fiscal redistribution.*

**Type:** Original Research

**Gambling Format:** Lottery

**Location(s):** Germany

**Years Impacts Examined:** 2006

**Impacts:** Social: Increased Socioeconomic Inequality (found to be regressive form of taxation)

48. Belanger, Y. D. (2002). The morality of aboriginal gaming: A concept in the process of definition. *Journal of Aboriginal Economic Development*, 2(2), 25-36.

**Type:** Original Research

**Gambling Format:** Indian Gaming—All Gambling

**Location(s):** Canada

**Years Impacts Examined:** to 2001

**Impacts:** Economic: Increased Public Services (gaming revenues being used to improve community services and infrastructure)

Social: Increased Quality of Life (an evolving, community-specific issue; with positive self-government implications)

49. Berdahl, L. Y. (1999). *The impact of gaming upon Canadian non profits: A 1999 survey of gaming grant recipients*. Calgary, AB: Canada West Foundation.

*To explore the issues surrounding non-profits and gambling, the Non-Profit Gaming Study began in November 1998, as one part of the larger Canada West Foundation Gambling in Canada Project. Questions explored in this report include: To what extent is the non-profit sector dependent upon gambling funds? Are non-profits using*

*gaming dollars to replace government funding? Is gambling revenue a stable source of funding for the sector? Are non-profits experiencing decreases in donations due to gambling? Does the non-profit sector experience ethical dilemmas due to this funding? If so, will this cause some non-profits to refuse gambling funds? How can a gaming grant system be constructed to best meet the needs of the non-profit sector?*

**Type:** Original Research

**Gambling Format:** Charitable (Pull-tickets, bingos, raffles, etc.); All Gambling

**Location(s):** Canada

**Years Impacts Examined:** 1999

**Impacts:** Economic: Increased Public Services

50. Betsinger, S. L. (2005). *The relationship between gambling and county-level crime*. United States -- Maryland: University of Maryland, College Park. M.A.

*Despite the rapid spread of various forms of legal gambling across the United States since the late 1980s and early 1990s, very little research has effectively examined the existence of a relationship between gambling and crime. Most of the research in this field has focused exclusively on cities with large gambling industries consisting of multiple casinos. Additionally, the effects of different types of gambling venues on county-level crime rates have been neglected in previous research. This study examines: (1) the impact of the introduction of gambling venues in general on county-level crime rates, and (2) the impact of different types of gambling venues on county-level crime. Findings for both parts of the study are mixed. The opening of gambling venues in general is associated with significant decreases in rape and assault rates; at the same time, gambling venues are found to lead to significant increases in larceny and arson rates.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos; Racinos

**Location(s):** United States

**Years Impacts Examined:** 1977-2001

**Impacts:** Social: Change in Crime (overall rates of various crime remained relatively unchanged; particular crime types did fluctuate)

51. Blalock, G., Just, D. R. and Simon, D. H. (2007). Hitting the jackpot or hitting the skids: Entertainment, poverty, and the demand for state lotteries. *American Journal of Economics & Sociology*, 66(3), 545-570.

*State-sponsored lotteries are a lucrative source of revenue. Despite their low payout rates, lotteries are extremely popular, particularly among low-income citizens. State officials laud the benefits of lottery proceeds and promote the fun and excitement of participation. This entertainment value is one explanation for lottery demand by the poor: individuals with lower incomes substitute lottery play for other entertainment. Alternatively, low-income consumers may view lotteries as a convenient and otherwise rare opportunity for radically improving their standard of living. Bad times may cause desperation, and the desperate may turn to lotteries in an effort to escape hardship. This study tests these competing explanations. We examine lottery sales data from 39 states over 10 years and find a strong and positive relationship between sales and poverty rates. In contrast, we find no relationship between movie ticket sales, another inexpensive form of entertainment, and poverty rates.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries

**Location(s):** United States

**Years Impacts Examined:** 1990-2002

**Impacts:** Social: Increased Socioeconomic Inequality (desperation motivated lottery consumption by the poor)

52. Blevins, A. and Jensen, K. (1998). Gambling as a community development quick fix. *Annals of the American Academy of Political and Social Science*, 556, 109-123.

*As small communities throughout the country felt the loss of federal programs and funding, four gold-mining towns in South Dakota and Colorado turned to the legalization of limited-stakes gambling as a means of economic revitalization. All four used the preservation of their historic Old West images to legitimate gaming, but differences in state legislation resulted in different patterns of development. In Deadwood, South Dakota, many small casinos were established, with most gaming tax revenues going toward the town's historic preservation. In Colorado, fewer but much larger casinos emerged, with the returns for historic preservation available to projects across the state, with the gambling communities of Cripple Creek, Central City, and Black Hawk benefiting little. Retail businesses were cannibalized as gambling became the dominant industry in all four towns. Resident populations and schools experienced little change; most of the change occurred in vehicular traffic, law enforcement, and the utilization of infrastructure.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- South Dakota -- Deadwood

United States -- Colorado -- Cripple Creek

United States -- Colorado -- Black Hawk

United States -- Colorado -- Central City

**Years Impacts Examined:** 1988-1996

**Impacts:** Economic: Increased Government Revenue (local and state increases in tax revenue); Increased Public Services; Increased Infrastructure Investment (for historic preservation); Increased Infrastructure Costs (vehicular traffic, law enforcement, and the utilization of infrastructure); Increase in Business Failures ("cannibalization" of retail businesses); Decreases in Business Revenue ("cannibalization" of retail businesses); Increased Property Values

Social: Increased Employment; Changed Leisure Activity (decreased family-oriented amenities); Increased Crime

53. Blue Thorn Research, Population Health Promotion Associates, PFIA Corporation and Williams, R. J. (2007). *Socioeconomic impacts of new gaming venues in four British Columbia lower mainland communities: Final report*. Victoria, BC: Gaming Policy and Enforcement Branch, Ministry of Public Safety & Solicitor General, Government of British Columbia.

*Casino style gambling began a rapid expansion across Canada beginning around 1993 and now accounts for a significant portion of all gambling revenue. However, despite this expansion, the overall socioeconomic costs, benefits, and impacts of casino gambling are unclear. The planned opening of four new gaming venues in the British Columbia Lower Mainland in late 2004 and early 2005 created an opportunity to scientifically study these impacts. Thus, the Gaming Policy and Enforcement Branch of the British Columbia Ministry of Public Safety and Solicitor General commissioned the present study in June 2004 to investigate these impacts so as to assist in its mandate to develop responsible gaming policies for the people of British Columbia. The principal focus of this study is on the three communities where these new venues were eventually located (City of Vancouver, City of Surrey, City of Langley), as well as the Township of Langley, which surrounds the City of Langley. The specific venues were: the Edgewater Casino in Vancouver, which opened in February 2005; the Hastings Racetrack in Vancouver, whose planned addition of slot machines has not yet occurred; the Fraser Downs Racetrack and Casino in Surrey, which*

added additional slot machines and table games to its existing facility in November 2004; and the Cascades Casino in Langley, which opened in May 2005.

#### EXCELLENT QUALITY

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Racinos

**Location(s):** Canada -- British Columbia -- Vancouver

Canada -- British Columbia -- Surrey

Canada -- British Columbia -- Langley

**Years Impacts Examined:** 2004-2006

**Impacts:** Economic: Increased Government Revenues; Increased Public Services; Increased Infrastructure Investment (due to venue construction... there was no impact on housing starts, residential/non-residential construction value); No Impact on Business Failures; Increased Business Revenue (revenue increase for hotels/motels not attributable to venues however); No Impact on Property Values

Social: Increased Negative Attitudes; No Impact on Crime (no change in 3 communities, decrease in 4<sup>th</sup> community); No Impacts on Employment; No Impact on Problem Gambling (except the one community that did not previously have convenient access to a casino).

54. Boardman, B. and Perry, J. J. (2007). Access to gambling and declaring personal bankruptcy. *Journal of Socio-Economics*, 36(5), 789-801.

*The link between gambling and bankruptcy is investigated. By exploiting a natural experiment, refining the identification techniques traditionally used in the literature, and incorporating time effects, it was found that casino style gambling and pari-mutuel wagering have different impacts on bankruptcy rates. The results show that pari-mutuel gambling increases bankruptcies for counties within 25 miles of a gambling facility by 9.25%. This represents a total increase of more than 1500 bankruptcies for the studied counties. Bankruptcy rates for counties more than 25 miles from pari-mutuel gambling establishments are not impacted. In addition, casino style gambling showed no significant impact on county bankruptcies, regardless of accessibility.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Horse Racing

**Location(s):** United States -- Kentucky

**Years Impacts Examined:** 1989-2001

**Impacts:** Social: Increased Problem Gambling (bankruptcies) for Horse Racing; No Impact on Problem Gambling (bankruptcies) for Casinos

55. Bondolfi, G., Jermann, F., Ferrero, F., Zullino, D. and Osiek, C. (2008). Prevalence of pathological gambling in Switzerland after the opening of casinos and the introduction of new preventive legislation. *Acta Psychiatrica Scandinavica*, 117(3), 236-239.

*Objective: This survey aimed to evaluate the prevalence of pathological gambling (PG) in the Swiss population in 2005 and the link between PG and alcohol abuse. This replication study made it possible to compare the prevalence rates of PG measured before and after the introduction of casinos and new preventive legislation. Method: A total of 2803 telephone interviews were completed using standardized assessment instruments for identifying gamblers (South Oaks Gambling Screen) and alcohol abuse (CAGE). Results: The past-year prevalence rates were 0.8% for problem and 0.5% for PG. No relationship was found between alcohol abuse and gambling behaviour. The past-year prevalence of disordered gambling did not change between 1998 and 2005. Conclusion: Despite widespread openings of casinos in Switzerland since 2002, the prevalence estimates of past-year disordered gambling have*



remained stable. The discussion focuses on different factors (social measures, legal obligations and social adaptational capacities) that may account for the stabilization of prevalence estimates.

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Switzerland

**Years Impacts Examined:** 1998; 2005

**Impacts:** Social: No Impact on Problem Gambling

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56. Borderlands Cooperative (2003). *Whitehorse gaming impact study. Report prepared for Community Development Department, City of Whitehorse, Melbourne, Victoria, Australia.*

**Type:** N/A

**Gambling Format:** N/A

**Location(s):** Melbourne, Australia

**Years Impacts Examined:** N/A

**Impacts:** N/A

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57. Boreham, P. and Dickerson, M. (1996). What are the social costs of gambling? The case of the Queensland machine gaming industry. *Australian Journal of Social Issues*, 31(4), 425-442.

*Gambling has frequently been blamed for contributing to a range of social and economic problems for players and their families. The introduction of gaming machines (more commonly referred to as "poker machines" or "pokies") to clubs and hotels in Queensland in 1992 attracted such criticism. This paper presents data from a survey conducted in Brisbane in May 1994, funded by the Department of Family Services and Aboriginal and Islander Affairs, which seeks to assess the characteristics of gaming machine players and to evaluate the extent to which players and their families seem disproportionately likely to experience social and economic difficulties. The survey led to a number of noteworthy findings, many of which challenge conventional stereotypes concerning the characteristics of players and the consequences of their playing. Firstly, men, the young and those in employment are disproportionately likely to be players. Secondly, playing is spread evenly across different occupations and levels of educational achievement. Thirdly, most players appear not to play very often or spend very large amounts of money. Fourthly, while there is evidence that money is being diverted from necessities to machine gaming, there is virtually no evidence of an association between machine playing and economic hardship.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- Queensland -- Brisbane

**Years Impacts Examined:** 1994

**Impacts:** Economic: Decrease in Business Revenue (money is being diverted from necessities to machine gambling);

Social: No Impact on Socioeconomic Inequality (no differences between gamblers/non-gamblers on ability to afford food, clothing, housing and other expenses)

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58. Brinkman, G. L. and Weersink, A. J. (2004). *Contribution of the horseman component of the harness horse industry to the Ontario economy*. Guelph, ON: Department of Agricultural Economics and Business, University of Guelph.

*The purpose of this study is to identify the impact of the slots revenue on the horse component of the standardbred racing industry, excluding the impacts from the operation of race tracks. The overall Ontario agricultural sector has experienced declining incomes in recent years (Brinkman, 2004), but the horse sector appears to be growing and prospering. As a consequence, the horse component of the standardbred racing industry presents a good case study for identifying the positive impacts of slots revenue on farm production, supporting service industries, and the rest of the Ontario economy. The specific objectives of the study are: 1. To identify the impact of the additional purse money on growth in the standardbred horse industry since 1998, and 2. To identify the distribution of growth by size of operation and purse earnings.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Racinos; Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Ontario

**Years Impacts Examined:** 1998-2002

**Impacts:** Economic: Increased Government Revenue (for province via slots activity; share returned to the standardbred horse operations generates additional tax revenue); Increased Business Revenue (With the slots revenue, harness horse operators expanded their horse numbers, horse values, and horse purchases and operating expenditures by an estimated 30%, 203%, and 106% between 1998 and 2002)

Social: Increased Employment (Industry respondents estimate 7,323 to 8,197 more jobs for employees and \$58.7 to \$62.9 million more in wages for just 2002 than would have existed without the slots revenue.)

59. Brome, H. (2006). *Economic impact of casino development [memorandum]*. Boston, MA: Federal Reserve Bank of Boston.

*This memo summarizes data on state revenues from gaming in New England and provides a review of the literature on the potential secondary impacts of casinos on local economies. It is intended to inform the discussion of the proposed casino in West Warwick by offering a synopsis of the research evidence on the secondary impact of casinos on economic growth. It does not provide an extensive cost-benefit analysis of the Warwick proposal. Nor does it attempt to estimate the social costs or overall fiscal impacts of casino development. We find that gaming revenues have stayed fairly constant as a share of overall general fund revenues in most New England states, with the exception of Rhode Island, where it has grown rapidly. Furthermore, the empirical evidence we reviewed suggests that, in most cases, large casinos in highly populated areas, such as the proposed West Warwick casino, have little secondary economic impact.*

**Type:** Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Connecticut

United States -- Maine

United States -- Massachusetts

United States -- New Hampshire

United States -- Rhode Island

United States -- Vermont

**Years Impacts Examined:** N/A

**Impacts:** N/A

60. Browne, M. N. and Kubasek, N. K. (1997). Should we encourage expansion of the casino gambling industry? *Review of Business*, 18(3), 9-13.

*Both proponents and opponents of the expansion of legalized gaming tend to approach their argument as committed partisans. The impact of the proposed expansion of gaming is considered from a detached stance. The expansion of casino gaming must be defended on instrumental grounds that are libertarian in nature. The argument is that people should generally be allowed to do what they want to do. Because jobs are created, tax revenues are generated and the alleged harms are poorly substantiated, supporters urge the spread of gaming.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

61. Bybee, S. and Aguero, J. A. (2000). The hospitality industry's impact on the state of Nevada: A summary & review. *Gaming Research & Review Journal*, 5(2), 27-31.

*An article summarizes the economic, fiscal, and social impact findings of The Hospitality Industry's Impact on the State of Nevada, a report issued in November 1998 by the International Gaming Institute. This summary includes data on jobs, wages, output, taxes, crime, and other social issues. A brief discussion is included regarding the authors' opinions of the state's dependence on the hospitality industry and gaming taxes, as well as the potential ramifications of this dependence in a changing economic environment.*

**Type:** Secondary Analysis

**Gambling Format:** All Gambling

**Location(s):** United States -- Nevada

**Years Impacts Examined:** 1987-1996?

**Impacts:** Economic: Increased Government Revenue; Increased Public Services (2.7% of all gaming revenues); Increased Infrastructure Costs (tourism visitors); Increased Infrastructure Investment  
Social: Increased Employment (hospitality = 60% of state workforce); Increased Problem Gambling and Related Indices; Increased Crime (higher than national average but similar when adjusted for tourist population)

62. Byron, P. and Quiggin, J. (1996). *Economic impact of the Brisbane casino*. Australia: James Cook University.

*The Brisbane Treasury Casino has had significant impacts on patterns of economic and social activity in the Brisbane CBD. It is less clear, however, what the impact has been on the broader regional economy. The object of this paper is to provide a framework for assessment of economic aspects of the impact of the Treasury Casino on the Brisbane regional economy, defined for this purpose as the Brisbane-Moreton Statistical District, which covers most of the 'south-east corner' of Queensland, including the Brisbane metropolitan area and the Gold Coast. The framework has been developed with the aim of allowing for integration between analysis of purely economic effects and the broader socioeconomic analysis of the project as a whole.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** Casinos

**Location(s):** Australia -- Queensland -- Brisbane Region

**Years Impacts Examined:** 1988-1996

**Impacts:** Economic: Increased Infrastructure Investment (during construction phase); Change in Business Revenue (some negative effect on non-gaming; offset by gaming-related gains)

Social: No Impact on Employment (when considered on the overall economy)

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63. Calcagno, P., Walker, D. and Jackson, J. (2010). Determinants of the probability and timing of commercial casino legalization in the United States. *Public Choice*, 142(1), 69-90.

*The adoption of lotteries by state governments has received significant attention in the economics literature, but the issue of casino adoption has been neglected by researchers. Casino gambling is a relatively new industry in the United States, outside Nevada and New Jersey. As of 2007, 11 states had established commercial casinos; several more states are considering legalization. We analyze the factors that determine a state's decision to legalize commercial casinos, using data from 1985 to 2000, a period which covers the majority of states that have adopted commercial casinos. We use a tobit model to examine states' fiscal conditions, political alignments, intrastate and interstate competitive environments, and demographic characteristics, which yields information on the probability and timing of adoptions. The results suggest a public choice explanation that casino legalization is due to state fiscal stress, to efforts to keep gambling revenues (and the concomitant gambling taxes) within the state, and to attract tourism or "export taxes."*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1985-2000

**Impacts:** Economic: Increased Government Revenue (motivation for legalization; a means of attracting tourism and retaining gambling spending in-state)

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64. California Economic Forecast (2008). *Economic impact of the Chumash Casino Resort on the County of Santa Barbara. Prepared for the Santa Barbara County Taxpayers Association*. Goleta, CA: California Economic Forecast.

*This report provides an economic assessment of the Chumash Casino Resort located in the Santa Ynez Valley. The area of assessment is Santa Barbara County. The Chumash Casino Resort (or "Casino") is evaluated in terms of its current economic impact.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- California -- Santa Barbara County

**Years Impacts Examined:** 2001-2006

**Impacts:** Economic: Increased Government Revenue (indirect and induced spending that occurs off tribal lands generates a significant amount of taxable activity); Increased Public Services (Tribal government); Increased Business Revenue (Increased transient occupancy taxes [tourism])

Social: Increased Employment (Between 2001 and 2006, the casino was the second fastest growing employer in Santa Barbara County, creating nearly 900 new jobs)

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65. Campbell, F. and Lester, D. (1999). The impact of gambling opportunities on compulsive gambling. *The Journal of Social Psychology*, 139(1), 126-127.

*A study conducted to determine the impact of gambling opportunities to the increase in the incidence of compulsive gambling in Louisiana revealed that the increasing rate of compulsive gambling in the said state could be blamed to*

*the presence of video-poker gambling machines all over the city, and even in Louisiana parishes. The study was also able to support the theory that people do not pass up opportunities, regardless of form, when faced or presented to them.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Electronic Gambling Machines (EGMs) -- Video Poker

**Location(s):** United States -- Louisiana

**Years Impacts Examined:** 1993

**Impacts:** Social: Increased Problem Gambling (EGMs somewhat associated with number of Gambling Anonymous (GA) groups; amount gambled was not associated with GA groups)

66. Campbell, F., Simmons, C. and Lester, D. (1999). The impacts of gambling on suicidal behavior in Louisiana. *Omega - The Journal of Death and Dying (Farmindale)*, 38(3), 235-239.

*A study of the sixty-four Louisiana parishes indicated that the per capita spending on lotteries (but not on video poker) and the unemployment rate were associated with changes in the suicide rate from 1989-1990 to 1994-1995. Parishes with higher rates of unemployment and more per capita spending on the lottery had a greater increase in the suicide rate over this period.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries; Electronic Gaming Machines (EGMs) -- Video Poker

**Location(s):** United States -- Louisiana

**Years Impacts Examined:** 1989-1990; 1994-1995

**Impacts:** Social: Increased Problem Gambling and Related Indices (the per capita spending on the lottery was associated with a greater increase in the suicide rate; per capita spending on video poker was not associated with changes in the suicide rate)

67. Carmichael, B. A. (2000). A matrix model for resident attitudes and behaviours in a rapidly changing tourist area. *Tourism Management*, 21(6), 601-611.

*This paper focuses upon the linkages between local resident perceptions of the impacts of a mega attraction, the Foxwoods casino and attitudes toward this casino; toward the tribe (the developers); and toward the casino as an economic development tool; as well as linkages with specific types of resident behaviours. Using data collected from 203 resident telephone interviews, these linkages are explored. Perceptions of casino impacts were found to influence attitudes toward the casino and toward the tribe. A matrix model which has been well referenced in the tourism literature but never before tested, was modified and used to analyse the linkage between attitudes and behaviours. A composite measure of attitude toward the casino was developed and this scale performed well on reliability and validity tests. A simplified version of this scale was applied to the attitudinal axis of the model. The behavioural dimension of the model was created using an index of positive, neutral and negative behaviours. Statistically significant results were achieved for attitudes toward the casino and specific behaviours and for attitudes toward the tribe and these behaviours. However, attitudes toward casinos as an economic development tool showed less significant results. (C) 2000 Elsevier Science Ltd. All rights reserved.*

**Type:** Original Research

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- Connecticut

**Years Impacts Examined:** 1995

**Impacts:** Social: No Impact on Attitudes (some more negative; most unchanged)

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68. Carmichael, B. A., Peppard, D. M. J. and Boudreau, F. A. (1996). Megaresort on my doorstep: Local resident attitudes toward Foxwoods Casino and casino gambling on nearby Indian reservation land. *Journal of Travel Research*, 34(3), 9-16.

*Residents of 3 rural communities in southeastern Connecticut, adjacent to the Native American-owned Foxwoods Resort and Casino, have mixed reactions to the casino and their Native American neighbours. Three years of surveys were used to monitor changing attitudes, analyze and model current attitudes and predict acceptance of future development. One of the more striking findings is that concern over the environmental effects of the casino development is a significant variable in all of the regression models. The importance of the natural environment as an explanatory variable is not surprising given broader popular concern over environmental issues, the rapidity of casino development and the lack of influence of town regulations on reservation development.*

**Type:** Original Research

**Gambling Format:** Casinos; Indian Gaming -- Casinos

**Location(s):** United States -- Connecticut

**Years Impacts Examined:** 1992; 1993; 1995

**Impacts:** N/A

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69. Carpenter, R. E. (2003). *Slot machine gambling in Maryland: An economic analysis*. Baltimore, MD: Maryland Institute for Policy Analysis & Research.

*Dr. Carpenter's paper takes no position regarding whether video gaming (a.k.a. slots) should be legalized in the state. Rather, he undertook this independent analysis to examine the costs and benefits of slots in order to help inform the debate around proposals to introduce them into Maryland.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

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70. Cartee, C. and Gordon, G. (1997). The gaming industry's effect on economic activity of the Mississippi Gulf coast. *Economic Development Review*, 15(2), 47-50.

*Economic development officials can add value to the public discourse concerning the economic effects of gaming by developing, or facilitating the development of, an empirically valid metric of gaming's economic effects on the regional economy. Use of a composite economic index that can measure relative strength and changes in strength of the economy over time is suggested. The development of such an index is illustrated with data from the Mississippi Gulf Coast. Variables chosen were retail sales, total employment, residential sales volume, and total bank deposits. The data in the study illustrate an undeniable effect of gaming on the region's economy. While this is to be expected, the magnitude of the effect is empirically documented through the use of an economic index designed to capture all dimensions of the economy in one statistic. According to the index, the economic well-being of the community is directly linked to gaming's success.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** Casinos

**Location(s):** United States -- Mississippi

**Years Impacts Examined:** 1990-1995

**Impacts:** Economic: Increased Government Revenue (large increase gaming revenue initially; slowing growth); Increased Business Revenue); Increased Personal Income (bank deposits slowly increased over time)

Social: Increased Employment (employment showing a small increase over time)

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71. Carteri, A. (1997). *The economic assessment of Casino Regina on the local and provincial economies*. Regina, SK: Tourism Saskatchewan.

*Casino Regina commissioned Tourism Saskatchewan to undertake an economic impact study of the casino on the provincial and local economies. The study involved measuring economic impacts from 2 sides; the operational side and the tourism side.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** Canada -- Saskatchewan

**Years Impacts Examined:** 1996

**Impacts:** Economic: Increased Business Revenue (increase of local GDP between \$32-M and \$54-M; impact of local visitors' spending was excluded)

Social: Increased Employment

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72. Center for Economic Development and Business Research (2007). *Fiscal and economic impact of casino gaming, South Central Kansas*. Wichita, KS: Wichita State University, W. Frank Barton School of Business.

*Market research and other similar studies have been conducted by entities interested in operating expanded gaming facilities. Additional studies have been conducted on behalf of the Kansas Lottery and the State of Kansas. The Center for Economic Development and Business Research Fiscal and Economic Impact Study updates and extends upon previous studies.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

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73. Center for Policy Analysis (2004). *Comparative lottery analysis: The impact of casinos on lottery revenues & total gaming revenues*. North Dartmouth, MA: University of Massachusetts Dartmouth.

*The Center for Policy Analysis at the University of Massachusetts Dartmouth conducted a review of the effect of casino gaming on state lottery performance and public finance in lottery states that have introduced casino gaming since 1989. The Center for Policy Analysis was retained by the Rhode Island State Senate for the purpose of conducting an objective economic and fiscal impact assessment of a proposed resort casino to be located in West Warwick, Rhode Island. The study utilized data from states that have traditional lottery games (i.e., instant tickets,*

*lotto, keno) and legalized commercial casinos. The study also assesses the impact that changes in the structural characteristics of lottery products have on Rhode Island Lottery performance. The study employs a comparative analysis, correlation matrices, and time series analysis.*

**Type:** Scoping Study; Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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74. Center for Policy Analysis University of Massachusetts Dartmouth (2004). *Economic & fiscal impact analysis for a West Warwick resort casino*. North Dartmouth, MA: Center for Policy Analysis University of Massachusetts Dartmouth.

*The Center for Policy Analysis at the University of Massachusetts Dartmouth was retained by the Rhode Island State Senate to conduct an objective economic and fiscal impact analysis of a proposed resort casino to be located in West Warwick, Rhode Island. The proposed casino's economic impact is quantified in terms of Gross Gaming Revenues (output), employment, and personal income. Gross fiscal impacts are estimated by applying the proposed wagering tax rate (25%) to Gross Gaming Revenue, by applying the effective personal income tax rate to new casino-related incomes, and by applying the sales tax and hotel tax rates to the casino's estimated non-gaming revenues. Net fiscal impacts are calculated by deducting the impact of a casino on VLT revenues from gross fiscal impacts.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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75. Centre for Social and Health Outcomes Research and Evaluation & Te Ropu Whariki (2006). *Socio-economic impacts of gambling: Developing a methodology for assessing the socio-economic impacts of gambling in New Zealand*. Auckland: Centre for Social and Health Outcomes Research and Evaluation & Te Ropu Whariki.

*The aim of this project was to develop a methodology for measuring the socioeconomic impacts of gambling in New Zealand. Funding was provided as part of the Problem Gambling Research Initiative (a collaboration between the Problem Gambling Committee and the Health Research Council of New Zealand).*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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76. Centre for Social and Health Outcomes Research and Evaluation & Te Ropu Whariki (2008). *Assessment of the social impacts of gambling in New Zealand. Report to Ministry of Health*. Auckland, New Zealand: Centre for Social and Health Outcomes Research and Evaluation & Te Ropu Whariki, Massey University.

*The objectives of this survey were to provide quantitative measures of the impacts of gambling from a representative sample of New Zealanders aged 15 to 80 years (to provide information at the individual level and, allow for aggregation, at the societal level). The survey collected quantitative measures which assessed the negative and positive impacts of gambling experienced by the gambler and by significant others (such as family and friends). The survey collected data on the impacts of gambling from three different ethnic groups within New Zealand; specifically Maori, Pacific peoples and Chinese/ Korean peoples.*

**Type:** Original Research

**Gambling Format:** All Gambling (included EGMs, Casinos, Horse Racing)

**Location(s):** New Zealand

**Years Impacts Examined:** 2007

**Impacts:** Social: Decreased Quality of Life/Public Health/Social Capital (people with higher levels of participation in gambling activities reported experiencing significantly worse physical health, worse mental health, poorer feelings about self, lower satisfaction with life and more likelihood of unemployment.); Increased Crime (increased participation increased likelihood of illegal activities); Problem Gambling (problem gambling negatively impacts mental health)

77. Chew, K. S. Y. (2000). Visitor suicide risk in casino resort areas. *Population Research and Policy Review*, 19(6), 551-570.

*In a well-publicized analysis of visitor suicides in three casino areas (Atlantic City, Las Vegas, and Reno), elevated suicide risk among interstate visitors was attributed to the presence of legalized gambling. A fundamental limitation of the analysis, however, was the absence of estimates for at-risk populations. In the present paper, an analysis of 1995 visitor-suicide rates (incorporating estimates for at-risk population) for 310 large US counties, including places both with and without gambling casinos, yields no evidence to support a gambling-suicide relationship.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- New Jersey -- Atlantic City

United States -- Nevada -- Reno

United States -- Nevada -- Las Vegas

**Years Impacts Examined:** 1995

**Impacts:** Social: No Impact on Problem Gambling (no evidence to support a gambling-suicide relationship regarding visitor suicides)

78. Chhabra, D. (2007). Estimating benefits and costs of casino gambling in Iowa, United States. *Journal of Travel Research*, 46(2), 173-182.

*A study aims to examine the benefits and costs of casino gambling in the state of Iowa. The results conclude a positive economic impact of casino gambling for the state of Iowa.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa

**Years Impacts Examined:** 2004

**Impacts:** Economic: Increased Government Revenue (Iowa casinos paid more than \$249 million in local, county, and state taxes in 2004; aggregate value-added economic impact of existing casinos on the state of Iowa was approximately \$1.23 billion without the substitute correction); Increased Public Services (charitable contributions made by the existing casinos through nonprofit organizations were estimated to be \$27.4 million); Costs Related to Problem Gambling (tabulation didn't include intangible values; based on estimates - e.g., Business and employment costs per pathological gambler were based on an estimated \$734 and \$1,687 on lost productivity, and lost and unemployment, respectively. Abused costs or transferred costs of pathological gamblers were approximated to be \$2,957. Illness cost per pathological gambler was estimated to be \$794 and social service costs were \$131 for therapy and treatment and \$298 for other social service costs such as Medicaid, welfare, and food stamps.);

Social: Increased Employment (34,364 jobs were created in the recreation and tourism industry because of casino visitor spending); Increased Consumer Surplus (the total benefit to Iowans from the added proximity to casino gambling was \$44.3 million.)

79. Chhabra, D. (2007). Exploring social exchange theory dynamics in Native American casino settings. *UNLV Gaming Research & Review Journal*, 11(2), 31-48.

*The proliferation of Native American Casino (NAC) gambling over the past few decades has generated a concern over the social, economic, and environmental impacts. This study examined the local resident perceptions of casino gambling impacts and their subsequent support for the NACs within the Social Exchange Theory (SET) framework. It further applied a similar framework to the non-NAC settings. While majority of the impact constructs failed to generate support for the NACs in the presence of intervening variables, a significant application of SET appeared among the non-NAC communities. Benefits were found to be significant for facilitating higher levels of support for the non-NACs. Overall, the results indicated that SET is not a universal phenomena and nature of casino ownership is more likely to influence residents' level of support.*

**Type:** Original Research

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- Iowa

**Years Impacts Examined:** 2004

**Impacts:** Social: Increased Positive Attitudes (opinion survey; residents generally see benefits)

80. Chhabra, D. (2008). Baby boom generation perceptions of casino gambling impacts within Social Exchange Theory settings. *Anatolia: An International Journal of Tourism & Hospitality Research*, 19(1), 71-88.

*The Baby Boom generation has become a tempting target for tourism suppliers and tourism development stakeholders. While it presents itself as a lucrative group to be tapped by destination marketing organizations, its perspective regarding tourism development in their home states is equally important because they form a substantial portion of the US population. This study aimed to examine the benefit and cost perceptions of the Baby Boom generation to identify factors likely to influence them. It also investigates the Influence of perceptions on support for casino gambling. The subjects under study were the local residents of Iowa, USA. The study results identify important determinants of perceptions and confirm a close-to universal influence of social exchange theory.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa

**Years Impacts Examined:** 2004?

**Impacts:** N/A

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81. Chhabra, D. (2008). Social Exchange Theory in resort and non-resort casino settings. *Anatolia: An International Journal of Tourism & Hospitality Research*, 19(1), 155-160.

*The article analyzes the resident perceptions of socioeconomic impacts associated with a destination resort casino and a non-resort casino in the U.S. Local residents have perceived the social and economic costs of non-resort casinos to be higher. They believed that resort casinos provide more social benefits than their counterparts. The social exchange theory (SET) framework is fully confirmed in the non-resort casino setting and partially confirmed in the resort-casino setting. Residents are also more supportive in resort-casino settings.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa

**Years Impacts Examined:** 2004?

**Impacts:** N/A

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82. Chhabra, D. (2009). Examining resident perceptions of negative gambling impacts with factual evidence. *UNLV Gaming Research & Review Journal*, 13(2), 27-43.

*This study attempts to establish a dialogue between perceived negative impacts associated with borrowing money to gamble and the resulting bankruptcies in three ways: matching local resident opinions with evidence they are asked to provide; determining causal effects of evidence on perceptions; and confirming the bankruptcy issues by using historical data. The results of the study are mixed. On one hand, they indicate a close tie between borrowing perceptions and real facts. However, on the other hand, they also report that bankruptcy related perceptions are not based on evidence and suggest that several factors are at play besides the casino gambling revenue. An empirical time series analysis of historical data illustrates and supports this contention. These results have important policy implications for regulators and operators of the casino industry.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa

**Years Impacts Examined:** 1995-2004; 2006

**Impacts:** Social: Increased Negative Attitudes (perception that casino gambling causes people to borrow); Increased Problem Gambling and Related Indices (Bankruptcies higher in casino counties; but a continued disparity from pre-casino period)

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83. Chhabra, D. (2009). Are late life gamblers a lucrative market in gambling tourism? A case study of Iowa, United States. *Journal of Hospitality & Tourism Research*, 33(2), 245-254.

*This study investigated the lucrative potential of late life gamblers in terms of spending, switching, travel, and economic impact. It further offered comparisons with the non-late life cohort. A rigorous process of statistical testing indicated both similarities and dissimilarities between the older and the younger cohorts. Switching emerged as a significant predictor of spending. The economic impact model using IMPLAN software afterward*

*indicated significant economic potential of the late life market in terms of direct, indirect, and induced impacts.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa

**Years Impacts Examined:** 2004-2005

**Impacts:** Economic: Increased Business Revenue (positive when adding casino revenue increase + ancillary business revenue; including substitution effect)

Social: Increased Employment (total number of employees generated by the senior citizen market was 15,223; substitution/cannibalization reduce the overall figure)

84. Chhabra, D. and Gursoy, D. (2007). Perceived impacts of gambling: Integration of two theories. *UNLV Gaming Research & Review Journal*, 11(1), 27-40.

*This study explores the race and educational attainment variations on resident perceptions and support for a proposed casino development. In addition, it investigates the influence of perceived benefits and costs on casino gambling support. The findings indicate that residents who are likely to receive personal benefits from gambling development tend to believe that its socioeconomic benefits outweigh the associated costs. Respondents' race is found to exercise a significant influence on their perceptions of benefits and costs, and casino development support. This study integrates two separate research streams of social exchange theory and social representation theory, and in doing so makes a major theoretical contribution in tourism and gaming literature.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa

**Years Impacts Examined:** 2004

**Impacts:** N/A

85. Citizens' Committee on Destination Gaming (2001). *The potential economic, social and image impacts of a casino in Moncton*. Moncton, NB: Moncton City Council.

*We reviewed the literature, identified 45 indicators to assess potential casino impacts, endeavoured to find the relative data from comparable cities (Sydney, Halifax and Sault-Sainte-Marie), then generalise the findings for Moncton, if and whenever possible.*

**Type:** Scoping Study; Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

86. City of Vancouver (1994). *City of Vancouver casino review: A discussion paper*. Vancouver: City of Vancouver.

*Large-scale casinos are a growing presence in North America, bringing with them the promise of large revenues but*

at the risk of significant public costs. A major casino has been proposed for Vancouver, and this discussion paper has been prepared to help interested citizens reflect on casino-related issues as part of a provincial Casino Review. The paper discusses the current status of British Columbia's gaming industry and then sets out questions to be considered in the following areas: the effect of a large casino on Vancouver's image; casino impacts on business, tourism, and cultural industries; effects on employment, including direct employment at the casino or on casino construction and indirect spin-off employment; the issue of problem gambling and its possible increase with the presence of a casino; and effects of a casino on local business, housing, existing gaming, and municipal government revenues and expenses.

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

87. Clark, C. and Walker, D. M. (2009). Are gamblers more likely to commit crimes? An empirical analysis of a nationally representative survey of US young adults. *International Gambling Studies*, 9(2), 119-134.

*We examine the relationship between gambling and criminal behaviour using data from the National Longitudinal Study of Adolescent Health (Add Health). Our data set includes survey responses from 6145 young adults. The results of our empirical analysis are consistent with the gambling literature in which it is suggested that higher gambling losses increase the propensity to commit crime. This study complements the current literature, as our data and empirical analysis allow us to control for many variables that have been neglected in previous studies, including various forms of gambling. Our findings provide useful information on the general relationship between gambling behaviour and criminal behaviour.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** All Gambling

**Location(s):** United States

**Years Impacts Examined:** 1994-1996; 2001-2002

**Impacts:** Social: Increased Crime (cards, horse racing and betting on sporting events, were found to have a significantly positive impact on the probability of committing a crime. We also found strong evidence that the more money a person had lost during a particular year, the more likely the person was to commit a crime, relative to the average survey respondent); No Impact on Crime (did not find any significant crime effects from lotto or casino game players)

88. Clayton, W. A., Wright, M. and Sarver, W. S. (1993). Benefit cost analysis of riverboat gambling. *Mathematical and Computer Modelling*, 17(4-5), 187-194.

*On November 26, 1991, the Pennsylvania House of Representatives rejected a bill to legalize riverboat gambling by a vote of 118-81. Six months prior, we undertook a study, the outcome of which was essentially to convince the Pennsylvania legislature and the world-at-large that it is not to the advantage of Pittsburgh to authorize this bill. Here is what we did and a brief description of the outcome. It is known that Governor Robert Casey would have vetoed the bill if it had passed. Also, Representative Frank Gigliotti, the original sponsor of the plan and its most vocal supporter, said he was inclined to wait for a new governor in three years before trying again.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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89. Clynych, E. J. and Rivenbark, W. C. (1999). Need money? Roll the dice. *International Journal of Public Administration*, 22(11,12), 1681-1703.

*In 1990, the Mississippi legislature legalized dockside casino gaming as a surrogate tax system for the state. Since the establishment of the first casino in 1992, the casino industry has become an important component in the state's revenue picture. During fiscal years 1993, 1994, and 1995, gaming taxes and fees accounted for 1.6%, 4.1%, and 5.04% of Mississippi's general fund revenue, respectively. In addition, certain localities have benefited from the industry as well. Beyond the direct revenue received through local taxation, casino gaming has substantially increased property tax revenue and sales tax collections. The Mississippi Gaming Commission believes, however, that long-term revenue stability depends on developing resort destinations as opposed to a continued reliance on day-trippers. Government no longer possesses the capacity to secure the cooperation of the citizenry in meeting the requirements of public need. Consequently, it uses a buffer to take resources from the citizenry without invoking its wrath.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Mississippi

**Years Impacts Examined:** 1993-1995

**Impacts:** Economic: Increased Government Revenue (state & local tax revenues increased; likely to level-off or decline in future)

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90. Collins, D. and Lapsley, H. (2003). The social costs and benefits of gambling: An introduction to the economic issues. *Journal of Gambling Studies*, 19(2), 123-148.

*This paper surveys the range of economic issues that need to be addressed in attempting to evaluate the social costs and benefits of gambling. It considers, inter alia, the nature of private and social costs and benefits and their policy significance, the important distinction between real and pecuniary costs, the incidence of gambling costs and benefits and the sources of gambling costs and benefits. Similarities and differences between the analysis of gambling and alcohol are considered. The paper concludes with a consideration of why various estimates of the social costs of gambling have produced such divergent results.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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91. Commission, N. H. G. S. (2010). *New Hampshire Gaming Study Commission Final Report of Findings*. Concord, NH, New Hampshire Gaming Study Commission.

*This report contains two major components. The first offers a summary and discussion of the Commission's major findings. This section is intended to provide policy makers and others with enough information to understand the basic considerations behind each finding, without having to pore through all of the extensive data, presentations, and other materials used by the Commission in reaching them. The second component of this report provides some of that detail and analysis. It begins with the New Hampshire Center for Public Policy's report, —The Impact of Expanded Gambling in New Hampshire, // which, among other things, analyzes the New Hampshire gaming market and includes simulations of the revenue and economic effects of a range of expanded gaming scenarios for New Hampshire. While the Center's report is data-driven, the section that follows it in this report is, by intent, opinion-driven. It is the final report of the University of New Hampshire's —What's At Stake // project team, which, as the report says, —collected citizen input to help inform the policy question of whether or not to expand legalized gambling // in New Hampshire. The report summarizes the wide range of topics and themes raised by people, both for and against expansion, who attended the Feb. 13 sessions. To provide some indication of how the Commission reached its findings, the next section of this report summarizes all Commission meetings, including presenters who appeared at the sessions. The Appendix contains additional materials.*

**Type:** Scoping Study; Methodological Issues

**Gambling Format:** Casinos

**Location(s):** United States — New Hampshire

**Years Impacts Examined:** N/A

**Impacts:** N/A

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92. Committee on the Social and Economic Impact of Pathological Gambling, Committee on Law and Justice, Commission on Behavioral and Social Sciences and Education and National Research Council (1999). *Pathological gambling: A critical review*. Washington, D. C.: National Academy Press.

*The charge to the Committee on the Social and Economic Impact of Pathological Gambling was to identify and analyze the full range of research studies that bear upon the nature of pathological and problem gambling, highlighting key issues and data sources that can provide hard evidence of their effects. An accurate examination of the costs of pathological gambling requires an assessment of the costs and benefits of gambling generally. Gambling appears to have net economic benefits for economically depressed communities, but the available data are insufficient to determine with accuracy the overall costs and benefits of gambling. Pervasive methodological problems prevent firm conclusions about the social and economic effects of gambling or pathological gambling on communities, nor can the committee say whether pathological gamblers contribute disproportionately to overall gambling revenues.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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93. Community Research Institute (2009). *Review of the casino literature with special emphasis on a casino's affect on the local community*. Fort Wayne, IN: Community Research Institute.

*In late 2008, the Community Research Institute at IPFW was engaged by the City of Fort Wayne to examine the previously published literature/research on the social costs and community impacts related to the presence of a casino facility. This examination was intended to provide the City with additional background information as it*

*considers a full range of issues regarding the potential for casino gaming within the Fort Wayne community. During the time period in which this report was prepared there have been concurrent discussions regarding a broad range of casino gaming options with considerable variations in the scope of these options. No attempt was made to assess the specific impact of a given alternative, but rather the focus of the report is to provide an in depth review of the extensive previously prepared research and literature on social costs and community impacts. Other topics which are certainly pertinent to the subject but which are beyond the scope of this paper include: the specific impacts on downtown development should a casino be placed in such a location; the specific impacts in the tourism and convention sector in Fort Wayne; the impact on the community's "brand"; and the various potential uses of gaming-generated revenues which might be directed to a host community.*

**Type:** Secondary Analysis; Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

94. Conner, T. and Taggart, W. (2009). The impact of gaming on the Indian nations in New Mexico. *Social Science Quarterly*, 90(1), 50-70.

*Objective. This study examines the economic and social impact of Indian gaming on the residents of the 22 pueblos and tribes in New Mexico. Method. We employ a naturally occurring quasi-experimental design that classifies each of the Indian Nations into one of two groups, gaming and nongaming, depending on the continuous operation of a "Las Vegas" style casino for multiple years in the 1990s. For these two groups we compare aggregate, primarily U.S. Census, data spanning 25 indicators in both 1990 and 2000. Results. Although improvements were evident for both groups, nine of the 12 economic measures and six of the 13 social measures revealed a growing disparity favoring gaming nations during the 1990s, while six other measures suggested declining but continuing differences. These findings persisted in light of controls for population and urbanization, though many of the economic differences disappeared for the rural nations. Conclusion. Gaming has had a positive economic and social impact on the gaming pueblos and tribes in New Mexico, especially for the more urbanized nations. The gaming nations are enjoying higher incomes, lower levels of poverty, and improvements in selected social areas compared to those nations opting not to pursue casino gaming in the 1990s.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming--Casinos

**Location(s):** United States -- New Mexico

**Years Impacts Examined:** 1990-2000

**Impacts:** Economic: Increased Public Services (improvements due to gaming revenues); Increased Personal Income.

Social: Increased Employment (lower unemployment for gaming nations); Increased Quality of Life/Public Health/Social Capital (gaming nations show improvement in various quality of life indicators, e.g. living in crowded homes, plumbing, kitchens, college graduates, etc.)

95. Coopers & Lybrand Consulting Group (1994). *Report to the Ontario Casino Project, Ontario Casino market and economic impact study*: Coopers & Lybrand Consulting Group.

*Coopers & Lybrand were engaged to prepare a report examining the market for and financial implications of*



*casinos in Ontario, identify the best markets, recommend the most appropriate sizes and gaming space configurations, outline the economic benefits to the Province, set forth key strategic considerations, and identify benchmarking and evaluation methodologies.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

96. Coryn, T. and Fijnaut, C. L., Alan, Eds. (2008). *Economic aspects of gambling regulation: EU and US perspectives* Boston, MA: Brill.

*Ongoing Challenges in Research on the Social Costs of Gambling by Douglas Walker; Closing Remarks: How Specific Is the Regulation of Gambling? by Eric Van Damme; Consumer Interests and the Regulation and Taxation of Gambling by David Forrest; The Study of Gambling Services in the Internal Market of the European Union: a Summary of the Final Report by William Eadington; Gambling Policy in the European Union: Monopolies, Market Access, Economic Rents, and Competitive Pressures among Gaming Sectors in the Member States by William Eadington; What Are the Costs and Benefits of Gambling in the United Kingdom? by Yuliya Crane; Bibliography: Cost-Benefit Analysis of Casino Projects; General Introduction by Cyrille Fijnaut; Casinos: Lessons Learnt from Cost-Benefit Analysis by Tom Coryn; The End of a Monopoly: an American Casino in Maastricht by Gerd Leers*

**Type:** Original Research; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

97. Cotti, C. (2008). The effect of casinos on local labor markets: A county level analysis *The Journal of Gambling Business and Economics*, 2(2), 17-41.

*The economic outcomes surrounding the dramatic spread of "Las Vegas" style casinos in the United States has become a point of great interest and inquiry both politically and academically. Prior research has tended to focus on regional studies and provided uniform conclusions regardless of differences in the nature of the community. Moreover, much of the previous empirical work fails to account for local level trends during estimation. By using a comprehensive data set on employment and earnings from across the US, and by including county-specific trends, this research hopes to alleviate these earlier concerns, as well as help reconcile differences in the early literature surrounding casino effects on related industrial sectors. Basic findings suggest that counties experience an increase in employment after a casino opens, but there seems to be no measurable effect on average earnings. More detailed analysis reveals that the effect on industries related to casinos is somewhat mixed, but in general mildly positive, as casinos provide a positive employment and earnings spillovers into the surrounding local community. Intertemporal estimation suggests that the casino effect changes over time, but also finds that time effects vary across sectors. Estimates of how overall effects vary across different population sizes find that employment growth is inversely related to county population. Finally, additional estimation finds little impact on employment levels in neighboring counties, although there are some small effects in certain industries.*

**GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1990-1996

**Impacts:** Economic: Increased Business Revenue (mildly positive in the entertainment industries)

Social: Increased Employment (little effect on average earnings; lower population areas benefit much more)

98. Cotti, C. and D. M. Walker. (2010). The Impact of Casinos on Fatal Alcohol-Related Traffic Accidents in the United States." *Journal of Health Economics*, 29 (6), 788-796.

*Casinos have been introduced throughout the U.S. to spur economic development and generate tax revenues. Yet, casinos may also be associated with a variety of social ills. One issue that has not been empirically tested in the literature is whether there is a link between casino expansion and alcohol-related fatal traffic accidents. We suspect a link may exist since casinos often serve alcohol to their patrons and, by their dispersed nature, could impact driving distances after drinking. Using the variation in the timing and location of casino openings over a ten year period, we isolate the impact of casino introduction on alcohol-related fatal accidents. Results indicate that there is a strong link between the presence of a casino in a county and the number of alcohol-related fatal traffic accidents. However, this relationship is negatively related to the local-area (county) population. Results prove durable, as we subject them to robustness checks.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1990 - 2000

**Impacts:** Social: Increased Crime (our estimates reveal that casino entry does significantly impact the danger posed by drunk drivers, but that the direction and size of this effect is related to the size of the population where the casino opens.)

99. Cozzetto, D. A. (1995). The economic and social implications of Indian gaming: The case of Minnesota. *American Indian Culture and Research Journal*, 19(1), 119-131.

*Provides a preliminary description of the impact of Indian gaming operations in Minnesota. Statewide, gambling revenues had grown to more than \$500 million by 1994. About 17,000 casino jobs will have been created by 1996, and welfare payments to Indians have declined. Among economic concerns are the possibility of market saturation and the appearance of the video lottery terminal outside the Indian casinos. Among social issues, compulsive gambling behavior has increased throughout the state.*

**Type:** Secondary Analysis

**Gambling Format:** Indian Gaming—All Gambling

**Location(s):** United States -- Minnesota

**Years Impacts Examined:** 1982-1995

**Impacts:** Economic: Increased Public Services (catalyst for tribal economic development)

Social: Increased Employment (17,000 casino jobs will have been created by 1996, and welfare payments to Indians have declined); Increased Problem Gambling and Related Indices (problem gambling increases both on-reserve and off-reserve)

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100. Crockford, D. N. and el-Guebaly, N. (1998). Psychiatric comorbidity in pathological gambling: A critical review. *Canadian Journal of Psychiatry*, 43(1), 43-50.

*The aim of this paper is to review critically the empirical data on the psychiatric comorbidity seen in pathological gambling from community and clinical samples, with emphasis on its implications for diagnosis, treatment, and future research. To this end, electronic (MEDLINE) and bibliographic-directed searches for literature relevant to the topic from 1966 to February 1996 were carried out, resulting in over 60 references being found.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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101. Cummings Associates (2004). *Analysis of the current markets for gaming in South Dakota, with projections for the likely impacts of new or enlarged facilities*. Arlington, MA: Cummings Associates.

*Several proposals have recently been made, or at least trial balloons floated, regarding new or expanded Native American gaming facilities in South Dakota. In addition, the State's gaming compacts with its tribes are soon up for renewal. To assist the State in assessing its options, the South Dakota Commission on Gaming retained Cummings Associates to conduct an analysis of the current markets for gaming in South Dakota, to compare them with the most relevant markets elsewhere, and to develop projections for the likely revenues and impacts of new or expanded gaming facilities at a range of locations around the State.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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102. Curran, D. and Scarpitti, F. (1991). Crime in Atlantic City: Do casinos make a difference? *Deviant Behavior*, 12(4), 431-449.

*The effect on the rate of crime since the introduction of legalized gambling in Atlantic City, NJ, is explored through a review of crime reports from various enforcement agencies. Casino-based vs non-casino-based crimes are differentiated, and it is concluded that although Atlantic City's crime rate is higher than the national norm, it is inaccurate to say that crime has risen in the community; when crimes committed at casinos are extracted from totals, the crime rates are much closer to normal. Therefore, it is concluded that legalization of gambling has not led to a significant increase in crime in Atlantic City.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- New Jersey -- Atlantic City

**Years Impacts Examined:** 1968-1989

**Impacts:** Social: No Impact on Crime in the community; Increase in Crime occurring at the casino (i.e., casino-based crime)

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103. de la Viña, L. and Bernstein, D. (2002). The impact of gambling on personal bankruptcy rates. *The Journal of Socio-Economics*, 31(5), 503-509.

*Both access to casino gambling and the personal bankruptcy rate have risen substantially in recent years. A reported correlation between greater access to gambling facilities and state and county bankruptcy rates suggests the increased availability of gambling might be an important factor explaining the increased national bankruptcy rate. A correlation between convenient access to gambling and high bankruptcy rates might also occur if distressed communities are more receptive to the introduction of casinos than prosperous communities. This paper utilizes panel data to investigate the impact of the introduction of casinos on county bankruptcy rates. The evidence reported here does not support the hypothesis that the introduction of gambling has impacted county bankruptcy rates.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1988-1996

**Impacts:** Social: No Impact on Problem Gambling and Related Indices (i.e., bankruptcies)

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104. Deloitte & Touche LLP (2006). *Economic Impact of British Racing*. London: British Horseracing Board.

*This report examines the economic impact of British Racing. Key participants in Racing are owners, racecourses, trainers, breeders, jockeys, stable staff, racing organisations and racing consumers such as racegoers, punters and sponsors. In addition to assessing its own economic impact this report positions British Racing in the context of British sports, betting, leisure and rural economies.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Horse Racing; Horse Racing -- Off-Track Betting

**Location(s):** United Kingdom

**Years Impacts Examined:** 2005

**Impacts:** Economic: Increased Government Revenue (£103m was generated from horseracing's punters by the statutory 10% levy applied to the profits of bookmakers, the Tote and betting exchanges); Increased Business Revenue (Racecourses generated expenditure of £298m from racegoers, corporate customers and sponsors; Off-course expenditure includes travel, accommodation and additional food and beverage, with a total of approximately £148m spent by 5.9m racegoers, with a further £32m spent on purchasing the specialist racing press.)

Social: Increased Employment (18,800 full time equivalent (FTE) jobs are created by the core industry.)

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105. Dense, J. (1999). State lotteries, commercial casinos, and public finance: An uneasy relationship? *Gaming Law Review*, 3, 3(5/6), 317-328.

*This article evaluates the economic impact of gambling generated revenue on state finance. In particular it assesses*

*the effect the introduction of commercial casinos has had on state lotteries and public finance. In analyzing seven lottery states that coexist with commercial casinos, Dense found that in the majority of cases state lottery revenues actually increased after the introduction of commercial casinos, thus calling the "substitution" theory into question. Given the finding that lotteries and casinos can prosper in the same jurisdiction and the weighty role that gambling revenue can play in public finance, Dense predicts that state governments will be more open to new sources of gambling revenue.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries; Casinos

**Location(s):** United States

**Years Impacts Examined:** to 1998

**Impacts:** Economic: Increased Government Revenue (little substitution effect between lotteries and casinos)

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106. Dense, J. (2004). The socioeconomic impact of gaming in the Virgin Islands. *Gaming Law Review*, 8(3), 175-188.

*Gambling has become a cultural tradition in the United States Virgin Islands. Despite its widespread acceptance, there is much confusion and misunderstanding about the social and economic impacts of gambling activity. A number of myths and factual inaccuracies, in tandem with a lack of objective and reliable data, have influenced the previous debate over gambling policy. A series of governmental and privately funded reports have been disseminated on the subject of gambling in the Virgin Islands. This study analyzes the current status of gambling activity along with the range of issues that the Virgin Islands' government should contemplate in the formulation and implementation of future gaming policy.*

**Type:** Methodological Issues

**Gambling Format:** Lottery; Horse Racing; Off-Track Betting; Cockfighting; Casinos

**Location(s):** United States -- Virgin Islands

**Years Impacts Examined:** to 2004

**Impacts:** Economic: Increased Government Revenues (gambling generates significant direct and indirect taxes from corporate income tax, personal income tax, tax on gross gaming revenue of casinos, tax on track commissions, and tax on the net profits of the VIL.); No Impact on Business Starts & Business Failures (anecdotal)  
Social: Increased Employment (casino has 244 employees; 1,541 for all gambling formats combined)

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107. Dense, J. (2007). State lotteries, commercial casinos, and public finance: An uneasy relationship revisited. *Gaming Law Review*, 11(1), 34-50.

*This study replicates an earlier research effort assessing state lotteries and their impact on public finance. In particular, this study will reassess the fiscal impact that commercial casino activity has had on state lottery performance.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** Lottery; Casinos; Electronic Gaming Machines (EGMs)

**Location(s):** United States

**Years Impacts Examined:** 1996-2005

**Impacts:** Economic: Increased Government Revenue (minimal substitution between lottery and casinos; far more among lottery products)

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108. Dense, J. (2009). Whither State Lotteries? *Gaming Law Review & Economics* 13(5): 404-414.

*The article presents an analysis of the state lottery in the U.S. and its impact on public finance. It states that lotteries are being pressured to increase their contribution to state budgets due to the fundamental changes to the U.S. economy. According to the article, the fiscal stress which confronts the state government requires a thorough evaluation of the role played by state lotteries in public finance and the U.S. culture as well.*

**Type:** Secondary Analysis

**Gambling Format:** Lotteries

**Location(s):** United States

**Years Impacts Examined:** 2007-2008

**Impacts:** Economic: Increased Government Revenue

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109. Department of Justice (2008). *Destination gaming: Evaluating the benefits for Victoria*. Melbourne, Australia: Department of Justice.

*This report outlines the Department of Justice's investigation into whether destination gaming would deliver a net community benefit for Victoria. The investigation was initiated following a commitment by the Government in Taking action on problem gambling.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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110. d'Hautesserre, A.-M. (1998). Foxwoods Casino Resort: An unusual experiment in economic development. *Economic Geography, Extra issue*, 112-121.

*The Foxwoods Casino Resort owned by the Mashantucket Pequots of Connecticut is the largest gambling casino in the Western world. The Pequots' Connecticut location enabled the tribe to open a casino, with accessibility to a large market and limited competition. The opening of Foxwoods is also the result of changes in relationships between Americans and Indians and shifts in American attitudes toward gambling. As attitudes and laws change, however, there is little chance that another Indian Foxwoods will be created here or elsewhere in the United States.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Connecticut

**Years Impacts Examined:** to 1997

**Impacts:** Economic: Increased Government Revenue (25% of slot revenue goes to State); Increased Public Services; Increased Infrastructure Investment; Increased Infrastructure Costs; Increased Business Revenue (increase tourism)

Social: Increased Employment; Increased Quality of Life/Public Health/Social Capital (cultural identity)

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111. Dimanche, F. and Speyrer, J. F. (1996). Report on a comprehensive five-year gambling impact. *Journal of Travel Research*, 34(3), 97-100.

*Presents a plan for an inter-disciplinary five-year study of the effects of riverboat and land-based gambling on the city of New Orleans, Louisiana. Gaps in gambling impacts research; Failure of two riverboat casinos; Acceptance of gambling as a recreational and touristic activity.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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112. Doran, B. and M. Young (2010). Predicting the spatial distribution of gambling vulnerability: An application of gravity modeling using ABS Mesh Blocks. *Applied Geography* 30(1): 141-152.

*To date, a method for the cost-effective prediction of venue catchments, and hence the spatial distribution of EGM harm, has not been available at the local level. As a first step in developing such a method, we explore the utility of a gravity modeling approach to predict the spatial distribution of venue catchments in a metropolitan region of the Northern Territory, Australia. Key inputs for the model presented include existing venue and recently released ABS Mesh Block data. We subsequently perform a combinatory analysis that integrates the predicted venue catchments with an Australian Bureau of Statistics (ABS) measure of social disadvantage to generate a gambling vulnerability surface. The advantages of this approach are that it allows visualization of catchments for effective communication, is based upon existing and current data that is available publicly through the ABS making it cost-effective, and provides a fine-grained local-level assessment of gambling vulnerability for applied policy purposes.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Electronic Gambling Machines

**Location(s):** Australia – Northern Territory

**Years Impacts Examined:** 2001

**Impacts:** Social: Problem Gambling (a tool to predict the spatial distribution of potential problem gambling with which to inform both EGM licensing decisions and harm-minimization strategies at the local scale.)

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113. Doughney, J. (n.d.). *An unconscionable business: The ugly reality of electronic gambling: A selection of critical essays on gambling research, ethics and economics.*

*Chapter 2 - The social economics of poker machines in Victoria: The human, policy and legal implications of the evidence; Chapter 9 - Victorian and Maribyrnong gambling: A case of diverted consumer spending*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- Victoria

Australia -- Victoria -- Maribyrnong

**Years Impacts Examined:** 1992-1998; 1992-2005

**Impacts:** Economic: Increased Government Revenues (increasingly unhealthy State reliance); Decreases in Business Revenues (consumption substitution)

Social: Increased Socioeconomic Inequality (high losses incurred by lower socio-economic status individuals)

114. Dubois, A., Loxley, J. and Wuttunee, W. A. (2002). Gambling on casinos. *Journal of Aboriginal Economic Development*, 2(2), 56-67.

*The current socio-economic conditions in many First Nations reserves do not appear to be improving and it is doubtful that casino development will alleviate the economic crisis on most First Nations reserves in Manitoba. If proceeding with casino development carefully, however, at an appropriate scale, in the right location and with due regard for maximizing jobs for First Nations people and purchases from First Nations enterprises, some communities might receive relatively large inflows of new capital. Although it might be difficult to immediately ascertain what the short and long term economic costs or benefits might be from casino development, the cultural and social impacts of casino development will almost certainly be felt for generations to come, and many of these will assuredly be negative, taking the form of a 'tax' on the poor as they seek to improve their lot through gambling. Gambling addiction will also certainly increase, with all the social problems that it brings.*

**Type:** Secondary Analysis

**Gambling Format:** Indian Gaming--Casino

**Location(s):** Canada

**Years Impacts Examined:** to 2001

**Impacts:** N/A

115. Durham, S. and Hashimoto, K. (2009). *The history of gambling in America: Balancing costs and benefits of legalized gaming*. Boston, MA: Prentice Hall.

*This book traces the history of American gaming from the first European settlers to the Nevada experiment. Includes information about the impact of gaming on society and early attempts to minimize that impact.*

**Type:** N/A

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

116. Eadington, W. (1995). Economic development and the introduction of casinos: Myths and realities. *Economic Development Review*, 13(4), 51-54.

*Casinos have become an economic development tool, but as most economic development tools, they should be used with care. The market a casino will attempt to serve needs to be clearly identified. Those promoting a casino also need to realize that casinos will have the greatest economic impact when they are located in natural tourism areas with existing tourist infrastructures. It is vital to their success as an economic development tool that casinos are socially and economically acceptable to the people in the location in which they are proposed.*



**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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117. Eadington, W. R. (1996). The legalization of casinos: Policy objectives, regulatory alternatives, and cost/benefit considerations. *Journal of Travel Research*, 34(3), 3-8.

*Legal casino-style gambling expanded dramatically in North America between 1988 and 1995. In the US alone, commercial gaming revenues reached nearly \$40 billion in 1994. The reasons for this sudden growth, how the industry has dealt with arguments against legalization and which groups have benefited from it are examined. A future problem for the industry is also discussed: as competition grows and markets become saturated, will gambling cease to be an economic stimulant? In light of the size of the commercial gaming industry in North America and the complexities it poses to public policy, there is a clear need to improve the level of understanding about the true benefits and costs associated with legal gambling. The critical public policy question is this: What is the appropriate form, presence, access to and promotion of commercial gaming in society?*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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118. Eadington, W. R. (1998). Contributions of casino-style gambling to local economies. *Annals of the American Academy of Political and Social Science*, 556, 53-65.

*This study examines the underlying economic and political dynamics that have led to the rapid proliferation of permitted gambling in the United States and other countries over the past decade. It notes that much of the justification for gambling has come from an attempt to exploit the economic rents and spillover benefits that accompany the legalization of gambling, and little is accorded the value that accrues to consumers of the commodity. A framework is developed to evaluate the impact of such considerations on the community and the region where gambling is permitted. Different types of casino-style gambling-destination resort casinos, urban casinos, and widely dispersed gaming devices-are evaluated in light of their relative impacts.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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119. Eadington, W. R. (1999). The economics of casino gambling. *Journal of Economic Perspectives*, 13(3), 173-192.

*Eadington examines the major changes that have developed in the casino and gaming industries over the past 40*

years, explores some of the economic principles that have shaped the development of permitted gaming, and discusses the public policy directions and controversies that have evolved with the expansion of legal gambling.

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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120. Eadington, W. R. (2001). The spread of casinos and their role in tourism development. *Contemporary issues in tourist development: Analysis and applications*. Pearce, D. G. and R. W. Butler. London, Routledge.

*This analysis examines the wide variety of casino ownership and regulatory regimes that have been introduced—especially since the mid-1980s—in light of their promises and their ability to contribute toward strategic tourism objectives. The first section looks at the recent experiences in the United States, Australia and Canada in the approaches they have taken in legalizing casinos. The next section discusses economic and social impact issues that are implied by the ways casinos have been implemented, especially in light of the political and economic tensions casinos create under varying circumstances. Common social and economic impacts that are associated with casino developments are examined, and factors that lead to increased or diminished controversy with regard to casinos are scrutinized. This section also looks at competitive relationships that exist among various types of gaming alternatives that are considered “hard gambling.” The final section looks at some possible futures that casino gaming might encounter in its various manifestations throughout the world.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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121. Eadington, W. R. (2003). Measuring costs from permitted gaming: Concepts and categories in evaluating gambling's consequences. *Journal of Gambling Studies*, 19(2), 185-213.

*This paper addresses the methodology of cost–benefit analysis as applied to policy alternatives regarding legally sanctioned gambling in its various forms. Existing economic studies regarding the social costs of gambling are reviewed and critiqued. Distinctions are made between definitions of social costs that are defined as actions which result in negative changes in aggregate social wealth (the “narrow” definition), and those which also include internal nonmarket costs that are borne by individual gamblers and their immediate families and acquaintances (the “broader” definition). This distinction is important because of its bearing on economic policies that are primarily concerned with economic efficiency versus policies that are more paternalistic, which attempt to protect individuals from self-damage or self-destruction by restricting their ranges of choice. Whether societies choose to prohibit or severely restrict permitted gambling, or allocate substantial resources to mitigate its negative side effects, rests largely on which of these perspectives regarding social costs they find more appropriate. Finally, the issue of social protection through restrictions on the availability of gambling to the entire population, versus a strategy tailored toward identifiable “problem” gamblers, is discussed.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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122. Eadington, W. R. and Doyle, M. R., Eds. (2009). *Integrated resort casinos: Implications for economic growth and social impacts*. Reno, NV: Institute for the Study of Gambling & Commercial Gaming.

*The editors would like to express their appreciation to the companies Hit and Harrah's for their financial support that permitted the organization and execution of the two-day Symposium on the Economic and Social Implications of Destination Resort Casino Hotels, held in Nova Gorica, Slovenia September 24–25, 2007. The papers in this volume were all presented at this Symposium, and the dialogue that took place during the Symposium was very useful in bringing to the light of reasoned discourse many of the complex and challenging issues that policy makers, politicians, business leaders, community leaders, academics, and representatives of the two companies had individually confronted.*

**Type:** Original Research; Methodological Issues

**Gambling Format:** Casinos; Casinos -- Resorts

**Location(s):** Slovenia

**Years Impacts Examined:** N/A

**Impacts:** N/A

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123. Econometric Research Limited (2005). *The economic impact of slot machines on horse racing and breeding in Ontario: Benchmarking the industry 1992-2004*: Ontario Ministry of Public Infrastructure Renewal.

*In the sections to follow in this Report we have divided the analysis of the horse racing industry into two major subsections. First, we will examine the structure and performance of the aggregate horse racing industry in Ontario. Second, we will examine some of the issues that arise out of the gaming activities of the industry in relation to other gaming activities in the province.*

**Type:** Secondary Analysis

**Gambling Format:** Horse Racing; Racinos; Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Ontario

**Years Impacts Examined:** 1992-2004

**Impacts:** Economic: Changes in Business Revenue (unmistakable upward trend in prices and sales as the horse racing industry in Ontario was invigorated by slot machine revenues and other technological improvements; racing wagering being cannibalized by slot machines)

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124. el-Guebaly, N., Hodgins, D., Smith, G., Williams, R., Wood, R., Schopflocher, D. and Williams, V. (2009). *Leisure, Lifestyle, and Lifecycle Project (LLLP)*. from <http://www.ucalgary.ca/lllp/>.

*The Leisure, Lifestyle, and Lifecycle Project is a 5-year study examining the leisure and recreational activities of participants, particularly their gambling behaviour. Participants in the study are residents from various locations across Alberta, consisting of five different age groups, and are comprised of both gamblers and non-gamblers.*

**Type:** Currently Underway  
**Gambling Format:** N/A  
**Location(s):** Canada -- Alberta  
**Years Impacts Examined:** From 2005

**Impacts:** N/A

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125. Elliott, D. S. and Navin, J. C. (2002). Has riverboat gambling reduced state lottery revenue? *Public Finance Review*, 30(3), 235-247.

*Over the past decade, most states have introduced lotteries, and many now license casinos. To what extent does the presence of licensed casinos cannibalize revenues from state-sponsored lotteries? To what extent does pari-mutuel betting cannibalize revenues from state-sponsored lotteries? Based on pooled cross-section data for the period from 1989 to 1995, this research reveals significant cannibalization of lottery revenues by both casinos and pari-mutuel betting. Nevertheless, states, in general, gain by having both lotteries and casinos. In the case of pari-mutuel betting, however, the substitution is so severe that, at existing effective tax rates, lost lottery revenues outweigh states' receipts from pari-mutuel betting.*

**Type:** Original Research; Secondary Analysis  
**Gambling Format:** Lotteries; Casinos; Horse Racing  
**Location(s):** United States  
**Years Impacts Examined:** 1989-1995

**Impacts:** Economic: Change in Government Revenue (casinos and pari-mutuel betting have significant negative impacts on gross lottery revenues)

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126. Erickcek, G., Timmeney, B. and Watts, B. (2008). *Calhoun County casino baseline study committee recommended indicators and baseline data report*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

*This study was funded by the Calhoun County Casino Baseline Study Committee to construct a profile of the county's social and economic conditions in anticipation of the opening of the Firekeepers Casino. The study identifies appropriate and relevant baseline indicators and data sources which will enable county stakeholders to have a better understanding of the short- and long-term effects of the Firekeepers Casino on the Calhoun County economic and social environment. In addition, the report offers an economic impact assessment of the construction and operation of the Casino on Calhoun County. It is the Committee's intention to maintain and, if necessary, revise these indicators so that they continue to track future social and economic development stemming from the casino.*

**Type:** Scoping Study  
**Gambling Format:** N/A  
**Location(s):** N/A  
**Years Impacts Examined:** N/A

**Impacts:** N/A

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127. Ernst & Young (1993). *Casino gambling and impacts on pathological or problem gambling. Final report to the*

Ministry of Consumer and Commercial Relations. Toronto, ON: Ernst & Young.

**Type:** Scoping Study; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** Canada -- Ontario -- Windsor

**Years Impacts Examined:** 1992?

**Impacts:** N/A

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128. Ernst & Young and Ontario Casino Corporation (1994). *Assessment of Casino Windsor: Final report*. Toronto: Ontario Casino Corporation.

*Presents a preliminary assessment of Windsor's temporary casino which opened in May 1994, examining the extent to which the facility has achieved the objectives established by the provincial government for the permanent casino. Study methodology consisted of reviewing existing primary and secondary data and conducting interviews with over 60 key members of the Windsor community and provincial government representatives. Sections of the study review: the implementation of the casino (who was involved, what they did, and the planning factors considered in anticipation of the casino's opening); the economic impacts of the casino on investment and employment, tourism industry development, and government revenue generation; the effects of the casino on generation of new industries in the Windsor area; and other non-economic impacts, including crime, city resident issues (traffic, noise), social impacts, and problem gambling.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** Canada -- Ontario -- Windsor

**Years Impacts Examined:** N/A

**Impacts:** N/A

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129. Europe Economics (2007). *Evaluating the impact of the first regional casino in Great Britain*. London: Europe Economics.

*The purpose of this report is to provide an independent, economics-based commentary on how that evaluation should be conducted. Since, in effect, the Government's future policy in relation to Regional Casinos hangs on the evaluation, it is vital that it be done independently, objectively and thoroughly. The report was commissioned in December 2006 on behalf of an umbrella group of interested parties within the leisure sector, including betting and gaming facilities, bars, restaurants, night clubs and other leisure facilities.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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130. Evans Group (1996). *A study of the economic impact of the gaming industry through 2005*. Evanston, IL: Evans Group.

**Type:** N/A

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

131. Evans, W. N. and Topoleski, J. H. (2003). *The social and economic impact of Native American casinos*: National Bureau of Economic Research, Inc, NBER Working Papers: 9198.

*In the late 1980s, a series of legal rulings favorable to tribes and the subsequent passage of the Indian Gaming Regulatory Act of 1988 legalized gaming operations on reservations in many states. Today, there are over 310 gaming operations run by more than 200 of the nations' 556 federally-recognized tribes. Of these operations, about 220 are Las Vegas' style casinos with slot machines and/or table games. We use a simple difference-in-difference framework where we compare economic outcomes before and after tribes open casinos to outcomes over the same period for tribes that do not adopt or are prohibited from adopting gaming. Four years after tribes open casinos, employment has increased by 26 percent, and tribal population has increased by about 12 percent, resulting in an increase in employment to population ratios of five percentage points or about 12 percent. The fraction of adults who work but are poor has declined by 14 percent. Tribal gaming operations seem to have both positive and negative spillovers in the surrounding communities. In counties where an Indian-owned casino opens, we find that jobs per adult increase by about five percent of the median value. Given the size of tribes relative to their counties, most of this growth in employment is due to growth in non-Native American employment. The increase in economic activity appears to have some health benefits in that four or more years after a casino opens, mortality has fallen by 2 percent in a county with a casino and an amount half that in counties near a casino. Casinos do, however, come at some cost. Four years after a casino opens, bankruptcy rates, violent crime, and auto thefts and larceny are up 10 percent in counties with a casino.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States

**Years Impacts Examined:** 1983; 1989; 1991; 1993; 1995; 1997; 1999

**Impacts:** Economic: Increased Public Services (general measures of economic improvement)

Social: Increased Employment (increase on-reserve and adjacent off-reserve); Increased Quality of Life/Public Health/Social Capital (mortality levels decreased after 4 or more years from opening); Increased Crime (up 10% in casino counties); Increased Problem Gambling and Related Indices (bankruptcies increased within 50 miles of casinos)

132. Farrell, L. and Forrest, D. (2008). Measuring displacement effects across gaming products: A study of Australian gambling markets. *Applied Economics*, 40(1), 53-62.

*This article seeks to establish the extent of displacement effects across gaming products. This is a particularly difficult question to address with precision. To date, many studies have looked at policy changes such as the introduction of a new product into the market to assess the severity of displacement effects. However, simple before and after comparisons are invalid. One needs to know what the appropriate counterfactual would have been in the absence of the policy change - which by its very nature is unobservable. The alternative is to look at identical populations exposed to different regimes. Australia represents such a natural experiment. In Australia, Betting and*

*Gaming legislation is determined at the state level, giving rise to some interesting differentials across states within a single country. This article estimates a state level (fixed effects) panel data model, exploiting the intra-state differences in the portfolio of gaming products available, to estimate the extent of displacement effects across the gaming sector. The results are particularly relevant to the current UK policy debate, which is focused on the potential impact on the existing market following a forthcoming, radical deregulation of the industry (with further liberalization proposed).*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** All Gambling (emphasis on lottery, casinos, and EGMs)

**Location(s):** Australia

**Years Impacts Examined:** 1982-2002

**Impacts:** Economic: Increased Government Revenue ("super"-casinos reinforce the lotto market; EGMs divert money away)

133. Farrigan, T. L. (2005). *The Tunica miracle, sin and savior in America's Ethiopia: A poverty and social impact analysis of casino gaming in Tunica, Mississippi*. United States -- Pennsylvania: The Pennsylvania State University. Ph.D.

*Realist philosophy reflects the state of mind and realist methodology the organizational condition that allows for an open and sophisticated examination of the complexities of the social world. Yet, realist methodologies are underdeveloped and poorly understood in the field of geography, which limits geographers' ability to translate their dynamic theories of the social world into as equally dynamic research in practice. This study emphasizes the need for greater investment in the development, communication, and application of realist approaches by demonstrating the value of this approach to the study of persistent poverty. Specifically, the Poverty and Social Impact Analysis (PSIA) framework developed by the World Bank as a means of assessing the distributional impacts of policy reform on vulnerable populations in developing nations is applied to a critical case in the United States-- Tunica County, Mississippi, one of the nation's historically most impoverished counties, previously known as America's Ethiopia. This comprehensive impact assessment of casino gaming as an economic development strategy in the Tunics area details the questionable politics of class, congruent with the region's history of race relations, as the primary causal factor in determining the poverty outcome. This is accomplished by using a realist methodology to amass conclusive evidence to argue that despite the success of the casino industry in Tunica County, where much has changed; much has tragically remained the same for the majority of the poor in this region.*

**GOOD QUALITY** (though convoluted)

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Mississippi -- Tunica

**Years Impacts Examined:** 1990-2003

**Impacts:** Economic: Increased Government Revenue (increase but high "leakage"); Increased Public Services; Increased Infrastructure Investment; Increased Business Revenue (increase for service industry - e.g., hotels); Increased Business Starts (apart from casino related businesses, few businesses developed to serve basic resident needs).

Social: Increased Employment (mainly an increase in lower-paid casino jobs); Changed Values (the poor are benefiting to some extent from the success of the gaming industry, but in many ways the economic growth and development associated with that development have set the wheels in motion for another round of discrimination, class elitism, and lack of investment in human capital.)

134. Federal Reserve Bank of Boston (1995). *Casino development: How would casinos affect New England's economy? Proceedings of a symposium sponsored by the Federal Bank of Boston, June 1.*

*While interest in the issue of the economic effects of casino development is intense, relevant empirical evidence is scant. For this reason, the Federal Reserve Bank of Boston held a one-day Symposium on Casino Development on June 1, 1995, bringing together experts from academia, government, Native American nations, and the gaming industry. This special report summarizes the participants' remarks.*

**Type:** N/A

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** Year Impacts Examined

**Impacts:** N/A

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135. Felsenstein, D. and Freeman, D. (1998). Simulating the impacts of gambling in a tourist location: Some evidence from Israel. *Journal of Travel Research*, 37(2), 145-155.

*Gambling and tourism are often perceived as complementary activities. This relationship is examined both conceptually and empirically. While land-based casino gambling is not a legalized activity at present in Israel, the economic impacts of introducing a casino at Israel's premier vacation resort, Eilat, are simulated. This ex ante evaluation shows that much of the output, income, and employment gains generated by a casino are likely to be captured outside the region and that localized impacts are small. The displacement of existing local economic activity is examined, and the case of increased tourism expenditures generated by the casino is stimulated. The public policy implications of these findings point to the necessity of developing activities that complement tourism at the local level, not just at the national level. The gambling-tourism relationship simulated for Eilat shows that national and local interests are not always synonymous.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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136. Felsenstein, D., Littlepage, L. and Klacik, D. (1999). Casino gambling as local growth generation: Playing the economic development game in reverse? *Journal of Urban Affairs*, 21(4), 409-421.

*Over the past decade, casino gambling has become increasingly popular as a local economic development strategy. This article makes the case that using gambling as an economic development tool presupposes a rather different economic development "game" from that traditionally played. While the introduction of gambling into a community might induce the same short-run effects (local jobs and incomes) as the introduction of any other economic development project, the economic development processes at work are very different. This article compares the way the economic development game is traditionally played to the way it is played "in reverse" when casino gambling is used as the tool. The main differences are in the areas of community-corporate relations, fiscal versus economic impacts, market development, the role of government, and the provision of public goods. In light of these differences, distinctions in strategic behavior are drawn. Empirical evidence from Indiana is used to analyze the economic development game as played in the traditional setting of corporate recruitment and in the context of casino gambling. The conclusions point to some of the factors that constrain a community from fully maximizing its*



*negotiating advantage as a resource holder.*

**Type:** Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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137. Fenelon, J. (2006). Indian gaming: Sovereignty and social change in economic development. *American Behavioral Scientist*, 50(3), 279-282.

*Indian gaming in the United States has continued to produce some of the most contentious debates in American society, calling into question historical and contemporary perspectives about who American Indians and Native nations are and were and their place in modern social systems. This special issue focuses on some of those heavily debated issues from a scholarly perspective, with additional perspectives from so-called traditionalists along with statements from American Indian leaders involved in these sociopolitical struggles. The complexities of Indian gaming--sovereignty constitutional laws, shifting courts, state domination, historical locations, compact process, modernity, economic development, politics--remain far beyond any journal issue in terms of scope and focus. However, it is necessary to fully explore these concepts in real situations, as these articles do, to understand how Indian gaming has arisen, why it is so contentious, and ways it can help or possibly hinder American Indian peoples.*

**Type:** Secondary Analysis

**Gambling Format:** Indian Gaming--casinos

**Location(s):** United States

**Years Impacts Examined:** N/A

**Impacts:** N/A

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138. Fenelon, J. V. (2006). Indian gaming: Traditional perspectives and cultural sovereignty. *American Behavioral Scientist*, 50(3), 381-409.

*This article discusses Indian gaming issues from the perspectives of "traditional" Lakota and Dakota people through the lens of cultural sovereignty. The author reviews the sociopolitical background of gambling on Indian reservations, compares mainstream and Indian gaming, observes historical locations of tribal sovereignty, identifies traditional views through direct interviews, and illustrates economic development and social change issues, all considered through the lens of modernity. Findings include positive effects in each of these social realms, comparatively few and quite small negative results, and internal conflicts arising from fast-acting shifts in social location for many Indian nations and tribes.*

**Type:** Original Research

**Gambling Format:** Indian Gaming--Casinos

**Location(s):** United States -- North Dakota

United States -- South Dakota

United States -- Minnesota

**Years Impacts Examined:** 1996-2000

**Impacts:** Social: Increased Employment; Changed Values (specifically cultural traditions)

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139. Fenich, G. G. and Hashimoto, K. (2004). Perceptions of cannibalization: What is the real effect of casinos on restaurants? *Gaming Law Review*, 8(4), 247-259.

*This article seeks to provide a well-developed and complete research strategy that will replace biased and/or anecdotal evidence with empirical analysis. New Jersey was only the second jurisdiction to legalize casino gaming in the U.S. Because of the size of gaming in Atlantic City, it has been cited as an example of all the negative experiences of having casinos in a jurisdiction. After the development of Atlantic City and the dollars of economic impact it generated, the casino industry experienced meteoric growth in riverboats and Native American casinos. Many communities have embraced this industry because of the economic activity, taxes, and jobs it generates. However, while many in the business community welcome casino development, one particular segment vehemently opposes it: the food and beverage or restaurant segment. Casinos did not cause the predicted drop in the number of businesses, nor the drop in people employed, nor the drop in payroll. In fact they have demonstrated just the opposite effect.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos (land-based; non-Indian)

**Location(s):** United States -- South Dakota -- Deadwood

United States -- Colorado -- Black Hawk

United States -- Colorado -- Central City

United States -- New Jersey -- Atlantic City

**Years Impacts Examined:** 1970-1995 (Atlantic City); 1983-1995 (Deadwood); 1984-1995 (Black Hawk & Central City)

**Impacts:** Economic: Increased Business Starts and Business Failures (# of food and beverage establishments, activity levels, sector employment and payroll all increase)

Social: Increased Employment (in food and beverage sector)

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140. Florida Office of Planning and Budgeting (1994). *The anticipated impact of casino gambling in Florida*. Tallahassee, FL: The Executive Office of the Governor.

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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141. Fong, T., Campos, M., Rosenthal, R., Brecht, M-L, Schwartz, B., Davis, A. & Chung, B. (2010). Problem Gambling Knowledge and Perceived Community Impact among Asian-Pacific Islanders and Non Asian-Pacific Islanders. *Journal of Immigrant and Minority Health*, 12(2): 173-178.

*Background: Emerging data suggest that problem/pathological gambling may be highly prevalent among Asian-Pacific Islanders (APIs) and that can be a major concern to their communities. Methods: This study surveyed problem/pathological gambling knowledge, attitudes, and perceived community impact of problem gambling among self-identified male and female APIs and non-APIs attending one of two API community events in Los Angeles County. Results: Unexpectedly, our results indicated no effect for ethnicity with regards to ratings of*

*problem/pathological gambling knowledge, community impact, or consequences. However, a gender effect with women reporting less problem/pathological-gambling-related knowledge than men, regardless of ethnicity was found. Over 40% of all respondents reported that problem/pathological gambling impacted their communities 'a lot', and the ratings for the impact of problem/pathological gambling was equal to ratings for other significant public health issues like diabetes, depression, drug abuse, and alcohol abuse. Discussion: Based on these results, it is recommended that evidence-based legislation support the development of culturally-relevant prevention and intervention programs for problem/pathological gambling in Los Angeles County.*

**Type:** Original Research

**Gambling Format:** All formats

**Location(s):** United States - California

**Years Impacts Examined:** 2005

**Impacts:** Social: Attitudes (Forty-one percent of the sample [similar for API and Non-API] reported that problem/pathological gambling impacted their community 'a lot'; Our analyses did not indicate significant ethnic differences in knowledge of, perceived community impact of, and consequences of problem/pathological gambling.)

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142. Forrest, D., Gulley, O.D., and Simmons, R. (2010). The relationship between betting and lottery play. *Economic Inquiry* 48(1): 26-38.

*We apply a novel daily time series data set of daily turnover from one of Britain's leading bookmakers to analyze potential substitution between lottery play and bookmaker betting. We find some evidence that bettors do substitute away from horse race, soccer and numbers betting when the effective price of lottery tickets is unusually low, that is, when there is a rollover or other special draw. This substitution has a highly specific pattern of timing that varies by sector. Our results further suggest that bettors rationally engage in forward-looking substitution within their betting portfolios. (JEL D12, L83)*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Horse Racing; Sports Betting; Lotteries

**Location(s):** United Kingdom

**Years Impacts Examined:** 1996-2001

**Impacts:** Economic: Government Revenue (Our results illustrate a certain willingness of players to reallocate their gambling budgets between the betting and the lottery as value for money changes from lottery draw to lottery draw. By implication, some of the loss in lottery sales since 2001 is likely to be attributable to the large change in the relative prices of the two products associated with reform of betting tax.)

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143. Fox Consulting, Saskatchewan Economic Development and Saskatchewan Gaming Commission (1993). *Economic feasibility of casino gaming in the Province of Saskatchewan*. Reno, NV: Fox Consulting.

*The scope of the study is to identify the demand for a casino facility and to examine the impacts which casino gaming may have on other forms of gaming. Additionally, the analysis is to estimate the economic impacts of the casino facility on jobs, taxes, and spending. This document presents the study findings. It looks at the current status of gaming in the province; the impact of casino gaming on other forms of gaming; and casino projections.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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144. Freund, E. A. and Morris, I. L. (2005). The lottery and income inequality in the States. *Social Science Quarterly*, 86, 996-1012.

*Objective. Since the early 1970s, income inequality in the United States has increased dramatically. We examine the impact of state lotteries on income inequality in the American states from 1976-1995. Methods. We use cross-sectional time-series data to evaluate the effect of lotteries as well as those of other state tax policies, redistributive programs, and demographic factors on income inequality. Results. We find that state lotteries foster income concentration. Ceteris paribus, states with lotteries have higher levels of income inequality than those states without a lottery. We also find that additional demographic and policy factors have an impact on income inequality in the states. Conclusions. One of the most important policy-oriented determinants of income inequality is the lottery and a significant portion of the increase in income inequality over our two-decade time period is attributable to the increasing prevalence and popularity of state lotteries.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries

**Location(s):** United States

**Years Impacts Examined:** 1976-1995

**Impacts:** Social: Increased Socioeconomic Inequality ("state lotteries have a sizeable impact on state-level income concentration")

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145. Freund, E. A. and Morris, I. L. (2006). Gambling and income inequality in the states. *Policy Studies Journal*, 34(2), 265-276.

*Since the early 1970s, income inequality in the United States has increased dramatically. We examine the impact of gambling on income inequality in the American states from 1976 to 1995. Using state-level data over time to evaluate the effects of various types of legalized gambling, from slot machine parlors to lotteries, we find clear evidence that lotteries foster inequality but no evidence of a similar effect for other types of gambling. These results suggest that the increasing prevalence of various forms of nonlottery gambling will have little effect on income inequality.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Indian Gaming; Lotteries; Slot Parlours

**Location(s):** United States

**Years Impacts Examined:** 1976-1995

**Impacts:** Social: Increased Socioeconomic Inequality (lotteries); No Impact on Socioeconomic Inequality (other forms)

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146. Friedman, J., Hakim, S. and Weinblatt, J. (1989). Casino gambling as a "growth pole" strategy and its effect on crime. *Journal of Regional Science*, 29(4), 615-623.

*The impact of casinos on crime spillover from Atlantic City, New Jersey, to other localities in the region is analyzed by using a quasi-experimental design. The sample consists of 64 localities with a population of over 1,000 in New Jersey's 3-county region of Atlantic, Cape May, and Ocean. Annual time-series data on the aggregate level of all crimes, 3 property crimes, the aggregate level of violent crime, and economic and population indicators were*

compiled for the years 1974 to 1984. The level of all crimes except larcenies appears higher in the post casino years 1978-1983 than in the earlier period 1974-1977. The level of all crimes in places adjacent to Atlantic City and along the major nontoll routes to Philadelphia and New York City up to approximately 30 miles from Atlantic City is higher than the level for the same crimes in other places. Violent crimes are generally 78% higher, burglaries 41% higher, vehicle thefts 30% higher, and larcenies 3% higher. Thus, the levels are higher than they would have been in the absence of casinos.

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- New Jersey -- Atlantic City Region

**Years Impacts Examined:** 1974-1984

**Impacts:** Social: Increased Crime (levels higher than they would have been in the absence of casinos; casinos might have "brought" more crime than the population increase warranted)

147. Furlong, E. J. (1999). *An examination of state casino gaming adoptions with an assessment of the impacts of external casino competition on Illinois riverboats and their local government hosts*. United States -- Illinois: Northern Illinois University. Ph.D.

*This dissertation examines the determinants of state casino gaming adoptions and also assesses the impacts of external casino competition on Illinois riverboat casinos and the gaming revenues of their local government hosts. The literature argues that state fiscal stress, interstate competition, political feasibility, and economic development goals have been the most important determinants of past state commercial gaming adoptions. Archival data was collected and analyzed using logistic regression in an attempt to identify variables that distinguish the nine states adopting private casino gaming in the 1980s and 1990s from those that have not. The aggregate results show that recent casino gaming adoptions were more likely to occur in ideologically moderate states with comparatively low current state tax burdens and historically below average state tax increases and employment gains. These findings strongly suggest that hypotheses related to political feasibility and state economic development are more compelling explanations of recent state casino gaming adoptions than are hypotheses emphasizing state fiscal stress and/or interstate competition. A historical analysis of the adoption of casino gaming by Illinois supported the quantitative results. As gleaned from newspaper accounts, Illinois lawmakers were motivated more by economic development and tax avoidance goals than revenue enhancement goals. However, competitive considerations also played a role in the proadoption decision. The time series analysis of the adjusted gross receipts and local government gaming revenue series of Illinois casinos shows that the emergence of external casino competition typically produces statistically significant adverse impacts. The magnitude of the effects of competition on the performance of existing Illinois casinos or revenues accruing to their local government hosts varies across regional gaming markets according to the proximity and intensity of external competition. Importantly, the entry of new casinos into a regional gaming market and changes in the gaming regulations of neighboring states that improved player access to casinos based in these states were both events that affected the performance of Illinois riverboats adversely. Generalizing from these results, it is likely that the implementation of dockside casino gaming in Illinois will adversely impact the performance of casinos in neighboring states.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States -- Illinois

**Years Impacts Examined:** 1991-1998

**Impacts:** Economic: Increased Government Revenue (implementation of dockside casino gaming in Illinois will adversely impact the performance of casinos in neighboring states)

148. Gardner, K. (2004). *Rochester downtown casino: An economic and social impact assessment*. Rochester, NY: CGR.

*The possibility of placing casino gambling in Rochester has stimulated heated conversation among residents and community leaders. CGR's task was to review national research, assess the revenue forecast provided by Wilmore and objectively discuss the ramifications of locating a casino in Rochester's downtown. The topic is complex and deserves the kind of serious study enabled by Wilmore through this study.*

**Type:** Scoping Study

**Gambling Format:** Casinos

**Location(s):** United States -- New York -- Rochester

**Years Impacts Examined:** N/A

**Impacts:** N/A

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149. Gardner, K. (2005). *Seneca Niagara Casino fiscal & economic impact on Niagara Falls, NY*. Rochester, NY: USA Niagara Development Corporation.

*The Center for Governmental Research and Gaming and Resort Development were pleased to respond to USA Niagara's request for a 2003-2004 fiscal and economic analysis of the Casino's impact on Niagara Falls, New York and to submit this report of our findings.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos -- Indian

**Location(s):** United States -- New York -- Niagara Falls

**Years Impacts Examined:** 2003-2005

**Impacts:** Economic: Increased Government Revenue (increased personal income tax and sales tax revenues at State level but lowered at city level); No Impact on Infrastructure Costs (police and fire services); No Impact on Business Revenue (slightly decreased hotel/motel revenue but there are confounding factors, e.g. SARS); No Impact on Property Values

Social: Increased Employment (increased even after minor displacement effects elsewhere)

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150. Gardner, L. K., Joseph, P. and Spilde, K. A. (2005). *Annotated bibliography: The social and economic impacts of Indian and other gaming*. Cambridge, MA: Harvard Project on American Indian Economic Development, John F. Kennedy School of Government, Harvard University.

*In its final report to Congress and the President in 1999, the National Gambling Impact Study Commission (NGISC) concluded: Only a limited number of independent studies exist regarding the economic and social impact of Indian gambling... This is an area greatly in need of further research. In an effort to assess the current state of gambling and Indian gaming research, while also evaluating the vast array of methods that researchers have employed to assess gambling's impacts, we have compiled an extensive database of gambling impact studies. While we cannot claim to have captured each and every study that has been published, we have attempted to reflect the multiple and contentious issues commonly raised in current gambling policy debates. The studies outlined herein address a host of public policy issues, ranging from tax considerations, to the prevalence of problem gambling, to the social impacts of gambling.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** Indian Gaming—All Gambling

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

151. Garrett, T. A. (1998). *An economic analysis of state lotteries in America*. United States -- West Virginia: West Virginia University. Ph.D. Dissertation.

*This dissertation is an economic analysis of state lotteries in America. The previous areas of lottery research and the dissertation research agenda are discussed in the first chapter. The second chapter provides statistics on state lotteries. State lottery sales, net lottery revenues, the growth of lottery sales in the United States, and target sources of net lottery revenues are all presented in Chapter 2. The third chapter of the dissertation examines the process of state lottery adoption, focusing on the behavior of state legislators and voters. Insight into the significant determinants of lottery adoption are presented, along with support for several theories of legislative behavior. Chapter 4 examines the tax incidence of West Virginia instant lottery games and on-line lottery games using county level panel data. The results suggest opposing tax incidences for different types of lottery games, casting some doubt on the general regressivity of state lotteries. In addition, the panel nature of the data allows a first-time examination of intertemporal changes in the incidence of a lottery tax. Chapter 5 explores the risk and return characteristics of lottery games as determinants of lottery sales. The expected value, variance, skewness, and kurtosis of all United States' lottery games are computed. The empirical results not only provide insight into the risk preferences of lottery players, but they suggest the optimal lottery game structure in terms of revenue maximization. The final research chapter of the dissertation examines the impact of video lottery on parimutuel racing revenues, focusing on two dogracing tracks in West Virginia. Evidence suggests that video lottery led to an initial increase in racing revenues, but the decade long decline in parimutuel racing continues. The findings have significant implications for track owners and the state. Chapter 7 provides a summary of the dissertation and concluding comments on the future of state lotteries in America.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries; Electronic Gambling Machines (EGMs); Dog Racing; Lotteries -- Internet

**Location(s):** United States; United States -- West Virginia

**Years Impacts Examined:** 1987-1997

**Impacts:** Economic: Increased Government Revenues (state lottery tax varies over time and by game; changes from regressive to progressive and vice-versa; parimutuel dog racing revenues higher after introduction and expansion of video lottery but the increase in racing revenues has steadily decreased throughout each expansion period; it appears video lottery complements parimutuel racing in the short run, but state lotteries and parimutuel racing are substitutes.)

152. Garrett, T. A. (2003). *Casino gambling in America and its economic impacts*. St. Louis, MO: Federal Reserve Bank of St. Louis.

*The report begins by providing an overview of casino gambling in the United States. The economic issues surrounding casino gambling are presented at length in section II of the report. Section III of the report provides a detailed look at the casino markets in states located in the Eighth Federal Reserve District. Section IV of the report is an empirical analysis of county employment changes before and after casino adoption. Guidelines on evaluating the success or failure of casino gambling in a local community are presented in section V of the report. The final section of the report is reserved for a summary and conclusions.*

**GOOD QUALITY****Type:** Original Research; Secondary Analysis**Gambling Format:** Casinos**Location(s):** United States -- Mississippi -- Warren County (Vicksburg casino market)

United States -- Mississippi -- Tunica County (Tunica casino market)

United States -- Illinois -- Massac County

United States -- Illinois -- St. Clair County

United States -- Iowa -- Lee County

United States -- Missouri -- St. Louis County

**Years Impacts Examined:** 1986-2001

**Impacts: Social:** Increased Employment (3 of the 4 rural counties that adopted casino gambling experienced increased household and payroll employment; harder to detect the impact of casino gambling in more metropolitan counties since employment is highly variable in these counties and casino gambling constitutes a small portion of total employment.)

153. Garrett, T. A. (2004). Casino gaming and local employment trends. *Federal Reserve Bank of St. Louis Review*, 86(1), 9-22.

*This paper explores how corporate casinos affect employment in six Midwestern counties using various employment data and forecasting models. Changes in both household and payroll employment are examined to separate the effects on the residents and businesses in counties with casinos.*

**GOOD QUALITY** (similar content to Garrett, 2003 report)**Type:** Original Research; Secondary Analysis**Gambling Format:** Casinos**Location(s):** United States -- Mississippi -- Warren County (Vicksburg casino market)

United States -- Mississippi -- Tunica County (Tunica casino market)

United States -- Illinois -- Massac County

United States -- Illinois -- St. Clair County

United States -- Iowa -- Lee County

United States -- Missouri -- St. Louis County

**Years Impacts Examined:** 1986-2001

**Impacts: Social:** Increased Employment ("While the evidence here suggests that rural counties that adopt casino gaming as a major industry are likely to see large employment gains, this does not suggest that every county can become like Tunica, Mississippi.")

154. Garrett, T. A. and Nichols, M. W. (2008). Do casinos export bankruptcy? *Journal of Socio-Economics*, 37(4), 1481-1494.

*This paper measures the extent to which destination resort casinos export bankruptcy back to visitors' home states. Previous literature has alluded to this possibility, but previous research has not examined the issue. Using various survey data, we calculate the number of visits from each state to casino resort destinations in Nevada, New Jersey, and Mississippi. We find strong evidence that states having more residents who visit out-of-state casino resorts have roughly 10% higher bankruptcy filing rates, on average. This effect is dominant in the south, suggesting that casinos located in wealthier regions are less likely to export bankruptcy.*



**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 2001-2002

**Impacts:** Social: Increased Problem Gambling and Related Indices (visits to casino resorts increase state per capita bankruptcies by roughly 10%, on average)

155. Gazel, R. (1998). The economic impacts of casino gambling at the state and local levels. *The Annals of the American Academy of Political and Social Science*, 556, 66-84.

*This article describes and discusses the components of an economic impact analysis of casino gambling in state and local economies. The article focuses on the positive and negative economic impacts of casino gambling and how large these impacts are likely to be in specific old and new gambling jurisdictions. An emphasis is given to the consequences of market structures used by specific jurisdictions in issuing gambling licenses. The article suggests that monopolistic and oligopolistic market structures are, in general, the major reasons for economic losses for state and local economies when they legalize casino gambling.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

156. Gazel, R. C., Rickman, D. S. and Thompson, W. N. (2001). Casino gambling and crime: A panel study of Wisconsin counties. *Managerial and Decision Economics*, 22(1-3), 65-75.

*The potential relationship between gambling and crime has been a key issue among supporters and opponents of the recent spread of casino gambling in the US. This study empirically investigates the potential link between casino gambling and crime for Wisconsin counties using the theoretical framework of Becker (1968). The results show that the existence of a casino within the boundaries of a county led to an increase in the county's crime rates. The results also suggest that a strong spillover effect took place across space, with counties adjacent to casino-counties experiencing higher crime rates.*

**Type:** Original Research

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- Wisconsin

**Years Impacts Examined:** 1981-1994

**Impacts:** Social: Increased Crime (some forms of crime do increase with the opening of casinos)

157. Gerstein, D. R., Volberg, R. A., Harwood, H. J. and Christiansen, E. M. (2004). Assessing the costs of 'addicted' gamblers. *Managerial & Decision Economics*, 25(4), 201-203.

*An article by researcher John W. Kindt, "The Costs of Addicted Gamblers: Should the States Initiate Mega-Lawsuits Similar to the Tobacco Cases?" refers at one point to research done for the National Gambling Impact Study*

*Commission in 1998-1999 by the staff of the National Opinion Research Center (NORC) at the University of Chicago, Chicago, Illinois. Kindt devotes only two paragraphs to the social cost estimates developed by the NORC team. However, these paragraphs are so heavily weighted with summary judgments and innuendoes as to require a comparatively lengthy commentary. Kindt criticizes NORC team for not providing a comparison or benchmark for the new approach by using both the old and new approaches with the same data. The NORC team was unable to fit both approaches within the constraints of their survey for the commission. But subsequent studies----carried out in Arizona, Nevada, North Dakota and Oregon--provide detailed information on how the NORC method performs in relation to older, more widely used problem gambling screens.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

158. Ghent, L. S. and A. P. Grant (2010). The demand for lottery products and their distributional consequences. *National Tax Journal* 63(2): 253-268.

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries

**Location(s):** United States – South Carolina

**Years Impacts Examined:** 2002-2003

**Impacts:** Social: Socioeconomic Inequality (we find each of the three types of games offered by the SCEL to be regressive; the lotteries may not be equally regressive in all locations, at all points on the income distribution, and for all types of games.)

159. Giacompassi, D. (1999). Attitudes of community leaders in new casino jurisdictions regarding casino gambling's effects on crime and quality of life. *Journal of Gambling Studies*, 15(2), 123-147.

*Conducted interviews with 128 key individuals in 7 communities that are new casino jurisdictions in order to examine the effects of casino gambling on crime and quality of life. Ss were community leaders (mayors, members of the city council, leading members of the business community, etc) or workers in areas (banking, law enforcement, social services, etc) that could provide insight into the positive and negative effects of casinos on the community. Ss responded to a series of core questions, followed by additional questions designed to elicit specific information based on the S's position. Content analysis was conducted comparing responses both within and between communities by leadership position. 59% of Ss were in favor of having the casino in the community, 65% believed that the casino enhances the quality of life in the community, and 77% believed that the casino has a positive effect on the local economy. Although a majority of the community leaders interviewed viewed the impact of casinos favorably, responses varied both by community and by position within the community. Since this group of community leaders was not selected randomly, it is possible that unintended interview bias shifted these results in a positive direction.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Mississippi -- Biloxi

United States -- Missouri -- St. Louis

United States -- Missouri -- St. Joseph

United States -- Alton -- Illinois

United States -- Illinois -- Peoria  
 United States -- Iowa -- Sioux City  
 United States -- Illinois -- East Peoria  
**Years Impacts Examined:** 1997?

**Impacts:** Social: Increased Positive Attitudes (59% of 128 interviewees favourable; 7/7 communities indicated positive for economy; 5/7 positive for quality of life; 6/7 no effect on crime)

160. Gonzales, A. A. (2003). Gaming and displacement: winners and losers in American Indian casino development. *International Social Science Journal*, 55(175), 123-133.

*In 1987, the United States Supreme Court issued its decision in California v. Cabazon Band of Mission Indians upholding the legal right of American Indian tribes to offer gaming on reservation lands. In the years since, tribal gaming has done what no other anti-poverty programme has been able to do in reversing the cycle of displacement and impoverishment of American Indians. In 2002, the 321 tribal casinos owned and operated by 201 Indian tribes generated over \$10.6 billion dollars in net revenues. Among its proponents, tribal gaming has been hailed as the "new buffalo" for American Indians and credited with transforming once destitute Indian reservations from the grips of poverty, unemployment, and welfare dependency. Given the choices at hand, it is not surprising that many have seized upon gambling as a bonanza and much needed, though controversial, form of development. Yet this reversal of fortune after generations of impoverishment has exacted a displacement toll few proponents have been willing to acknowledge: social conflict, tribal factionalism, and cultural antagonism. In this essay I consider some of these displacement effects, their historical antecedents, and the ramifications for Indian and non-Indian communities.*

**Type:** Original Research  
**Gambling Format:** Indian Gaming -- Casinos  
**Location(s):** N/A  
**Years Impacts Examined:** N/A

**Impacts:** N/A

161. Gonzales, A. A., Lyson, T. A. and Mauser, K. W. (2007). What does a casino mean to a tribe? Assessing the impact of casino development on Indian reservations in Arizona and New Mexico. *The Social Science Journal*, 44(3), 405-419.

*The social and economic impact of casinos on Indian individuals and households living on reservations in Arizona and New Mexico are examined. Result show that casino gambling is associated with social and economic improvements for both Indian and non-Indian population, but Indian gaming does not result in positive outcomes in all cases.*

**Type:** Original Research; Secondary Analysis  
**Gambling Format:** Indian Gaming -- Casinos  
**Location(s):** United States -- Arizona  
 United States -- New Mexico  
**Years Impacts Examined:** 1990; 2000

**Impacts:** Social: Increased Employment (increase of 16% for reservations with casinos [similar increases for those without casinos as well]); Increased Personal Income (some increase in income; poverty rates fell more rapidly on reservations with casinos); Decreased Property Values (house values on reservations without casinos outpaced

reservations with casinos).

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162. Goodman, R. (1994). *Legalized gambling as a strategy for economic development*. Northampton, MA: United States Gambling Study.

*The goal of this report was to assess the economic, social and legal consequences that occur when governments try to use gambling as a way to improve their economies. The research is intended to help give communities and policy makers a more informed and objective basis for making decisions. Fourteen studies of gambling's economic impact were analyzed and it was found that claims of economic benefits were generally exaggerated, while costs were understated.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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163. Goodman, R. (1995). *The luck business: The devastating consequences and broken promises of America's gambling explosion*. New York: Free Press.

*In this damning indictment of legalized gambling, Goodman documents how this business, which generates more than \$40 billion dollars a year in revenues, is also the cause of myriad economic and social problems for the very communities that have looked to it as a panacea.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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164. Goodman, R. and Fesser, E. (2003). *The economic impacts of introducing slot machines at racetracks in Pennsylvania: A review of the Penn State Harrisburg study*. from <http://www.commonwealthfoundation.org/research/detail/the-economic-impacts-of-introducing-slot> .

*The Commonwealth Foundation of Harrisburg, Pennsylvania asked us to examine the methodology and conclusions of the January 2001 report, "The Economic Impact of Horse Racing on the Economy of Pennsylvania" (which we refer to as the "PSH Study") that the Institute of State and Regional Affairs at Pennsylvania State University, Harrisburg prepared for the state's four racetrack owners. The racetracks are Ladbroke at The Meadows, Penn National Race Course, Philadelphia Park Racetrack, and The Downs at Pocono. We hope our review will contribute to an understanding of the potential economic impacts of introducing slot machine gambling at racetracks in Pennsylvania.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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165. Goss, E. (2002). *The economic impact of an Omaha, Nebraska casino. Prepared for the Greater Omaha Chamber of Commerce.* Omaha, NE: Goss & Associates.

*This study examines the impact of "commercial casinos" focusing specifically on the impact of the addition of a casino to the Omaha, Nebraska economy.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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166. Goss, E. and Morse, E. (2004). *The impact of casino gambling on bankruptcy rates: A county level analysis.* Omaha, NE: Creighton University.

*Roughly 250 U.S. counties have legalized casino gambling within their borders. Sixty of these counties have established commercial casino operations, with the remainder supporting tribal casinos. Past research has provided mixed results regarding the impact of these casinos on market and non-market outcomes. The goal of this research study is to estimate the impact of casinos on two of these outcome variables -- individual and business bankruptcy rates -- over the decade of the 1990s. The study matches each casino county with a non-casino county according to U.S. Census region, household income, population and population density. Using simple descriptive statistics and regression analysis, the study estimates the impacts of casinos on bankruptcy rates. Our regression analysis on matched-pair counties indicates that those counties that legalized casino gambling during the 1990s experienced a cumulative growth rate in individual bankruptcies that was more than double the growth rate for corresponding non-casino counties. However, the cumulative rate of change in business bankruptcy rates in the casino counties was, on average, 35.4 percent lower than the applicable rate for the non-casino counties.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States

**Years Impacts Examined:** 1990; 1999

**Impacts:** Economic: Decreased Business Failures (business bankruptcy rates in casino counties 35.4% less than in counties without casinos)

Social: Increased Problem Gambling and Related Indices (individual bankruptcy rates in casino counties 100% higher than in counties without casinos).

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167. Goss, E., Morse, E. and Deskins, J. (2009). Have casinos contributed to rising bankruptcy rates? *International Advances in Economic Research*, 15(4), 456-469.

*This paper examines the relationship between casino gambling and bankruptcy rates in U.S. counties using a panel of U.S. county-level data from 1990 through 2005. We contribute to the literature in several ways, perhaps most notably by examining the possibility that the effect of a casino on bankruptcy may differ over the casino's lifespan.*

*Results confirm this possibility, indicating that the impact of casinos on bankruptcy follows a "U-shaped" curve over the life of the casino. More specifically, regression analysis indicates the existence of a casino in a county increases the bankruptcy rate by more than 9% in the first year of operation. The percentage of additional bankruptcies then decreases through the third year after the casino opens. Bankruptcy rates in casino counties then slightly fall below that of non-casino counties during the fourth through seventh years after opening, increasing once again in the eighth year and thereafter. This cycle corresponds closely to the 6 year statute of limitations period applicable to Chapter 7 bankruptcies.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1990; 2005

**Impacts:** Social: Increased Problem Gambling and Related Indices (increase in bankruptcies in U.S. counties in first three years of casino operations; during fourth through seventh years, bankruptcy rates are below non-casino counties; thereafter rates rise again)

168. Govoni, R., Frisch, G. R., Rupcich, N. and Getty, H. (1998). First year impacts of casino gambling in a community. *Journal of Gambling Studies*, 14(4), 347-358.

*This article presents first year results of a multi-year project to measure the impact of the opening of Casino Windsor on gambling behavior in Windsor, Ontario, Canada. A random telephone survey of gambling behavior was conducted with 2,682 adult residents of metropolitan Windsor prior to the opening of Casino Windsor, and was repeated with 2,581 residents one year later. There were no statistically significant changes in the rates of problem and pathological gambling among men, women, or the general population one-year following the opening of the casino. Although there was some evidence of higher-spending gamblers within the post casino sample, no statistically significant differences were found between pre- and post-casino per capita gambling expenditures. Implications of these results for the future measurement and treatment of problem and pathological gambling are discussed.*

#### **GOOD QUALITY**

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Canada -- Ontario -- Windsor

**Years Impacts Examined:** 1993-1995

**Impacts:** No Impact on Problem Gambling and Related Indices (no increase in rates of problem/pathological gambling one year after the opening of Casino Windsor)

169. Grant, J. E., Schreiber, L, Odlaug, B., Won Kim, S. (2010). Pathologic gambling and bankruptcy. *Comprehensive Psychiatry* 51(2): 115-120.

*Background: Although prior studies have examined rates of bankruptcy in pathologic gambling (PG), there are only limited data regarding the clinical correlates of those with PG who declare bankruptcy because of gambling. Method: 517 consecutive subjects with DSM-IV Pathological Gambling (54.7% females; mean age 47.6 years) were grouped into 2 categories: those who had (n = 93; 18.0%) and had not (n = 424; 82.0%) declared bankruptcy secondary to gambling. Groups were compared on clinical characteristics, gambling severity (using the Yale-Brown Obsessive-Compulsive Scale Modified for Pathological Gambling, Gambling Symptom Assessment Scale; Clinical*

*Global Impression--severity scale, and time and money spent gambling), and psychiatric comorbidity. Results: Gamblers who had declared bankruptcy were more likely to be single ( $p = .004$ ); have an earlier age of problem gambling onset ( $p = .032$ ); and have more financial ( $p < .001$ ), work-related ( $p = .006$ ), marital ( $p < .001$ ), and legal ( $p < .001$ ) problems secondary to their gambling. They also reported higher rates of depressive disorders ( $p < .001$ ), substance use disorders ( $p = .005$ ) and were more likely to be daily users of nicotine ( $p = .022$ ). Money spent gambling did not differ significantly between groups. Conclusion: These preliminary results suggest that bankruptcy in PG may be associated with specific clinical differences. Treatment strategies may want to assess bankruptcy status to develop more effective treatments that take account of these clinical differences.*

**Type:** Original Research

**Gambling Format:** All formats

**Location(s):** United States

**Years Impacts Examined:** 2000-2008

**Impacts:** Social: Problem Gambling and Related Indices (In this study, we explored the clinical differences between treatment-seeking pathologic gamblers with and without a history of bankruptcy. Interestingly, gamblers who had declared bankruptcy did not lose a greater percentage of their income gambling or spend more time gambling than those who had never declared bankruptcy, nor did the severity of their gambling differ from those without bankruptcy histories. What did emerge from these data, however, was a complex picture of gamblers with an earlier age of problem gambling onset, more problems associated with their gambling (eg, financial, marital, occupational), and a greater likelihood of a family history of addictions.)

170. Griffiths, M. D. and Parke, J. (2002). The social impact of Internet gambling. *Social Science Computer Review*, 20(3), 312-320.

*Technology has always played a role in the development of gambling practices and continues to provide new market opportunities. One of the fastest growing areas is that of Internet gambling. The effect of such technologies should not be accepted uncritically, particularly as there may be areas of potential concern based on what is known about problem gambling offline. This article has three aims. First, it overviews some of the main social concerns about the rise of Internet gambling. Second, it looks at the limited research that has been carried out in this area. Third, it examines whether Internet gambling is doubly addictive, given research that suggests that the Internet can be addictive itself. It is concluded that technological developments in Internet gambling will increase the potential for problem gambling globally, but that many of the ideas and speculations outlined in this article need to be addressed further by large-scale empirical studies.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

171. Griffiths, M., Parke, A., Wood, R. and Parke, J. (2006). Internet gambling: An overview of psychosocial impacts. *UNLV Gaming Research & Review Journal*, 10(1), 27-39.

*Technological innovation has always played a role in the development of gambling behaviour, primarily through providing new market opportunities. Early prevalence studies of Internet gambling in the UK, Canada and the US have shown that Internet gambling is not a cause for concern at present. However, this seems likely to change as more people start to use the Internet for leisure activities. After a brief overview of gambling technologies and*

deregulation issues, this paper examines the impact of technology on gambling by highlighting salient factors in the rise of Internet gambling (i.e., accessibility, affordability, anonymity, convenience, escape immersion/dissociation, disinhibition, event frequency, asociability, interactivity, and simulation). The paper also overviews some of the main social impacts surrounding Internet gambling, such as protection of the vulnerable, Internet gambling in the workplace, electronic cash, and unscrupulous operators. Recommendations for Internet gambling operators are also provided.

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

172. Griffiths, M., Wardle, H., Orford, J., Sproston, K. and Erens, B. (2009). Sociodemographic correlates of Internet gambling: Findings from the 2007 British Gambling Prevalence survey. *CyberPsychology & Behavior*, 12(2), 199-202.

*This study provides the first analysis ever made of a representative national sample of Internet gamblers. Using participant data from the 2007 British Gambling Prevalence Survey (n = 9,003 adults aged 16 years and over), all participants who had gambled online, bet online, and/or used a betting exchange in the last 12 months (n = 476) were compared with all other gamblers who had not gambled via the Internet. Overall, results showed a number of significant sociodemographic differences between Internet gamblers and non-Internet gamblers. When compared to non-Internet gamblers, Internet gamblers were more likely to be male, relatively young adults, single, well educated, and in professional/managerial employment. Further analysis of DSM-IV scores showed that the problem gambling prevalence rate was significantly higher among Internet gamblers than among non-Internet gamblers. Results suggest that the medium of the Internet may be more likely to contribute to problem gambling than gambling in offline environments.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Internet Gambling

**Location(s):** United Kingdom

**Years Impacts Examined:** 2007

**Impacts:** Social: Increased Problem Gambling and Related Indices (problem gambling was significantly more likely among Internet gamblers when compared to non-Internet gamblers)

173. Grinols, E. L. (1994). Bluff or winning hand? Riverboat gambling and regional employment and unemployment. *Illinois Business Review*, 51(1), 8-11.

*Generally, an additional dollar of ordinary tax imposes excess costs on the private sector between \$0.17 and \$0.56 for every dollar raised, due to market dislocations that necessarily accompany a tax. Raising revenue through gambling translates into \$1.50 or more in excess costs for every tax dollar raised when costs such as direct crime costs are taken into account. In response to criticism, the gambling industry has frequently promised to provide jobs and economic development to the municipalities where it seeks to locate. A small town stands the best chance of showing gains since it is more likely that gamblers will be from outside the local area. A simple before-and-after comparison reveals that riverboats did not create the jobs that were promised and had little effect on reducing unemployment. In the case where employment was increased, the improvement was less than 50% of riverboat employment.*

**Type:** Original Research



**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States -- Illinois

**Years Impacts Examined:** 1989-1993

**Impacts:** Social: No Impact on Employment (the data are unable to show any net effect on unemployment and very little net effect on employment as a result of gambling in the communities where it has been introduced).

174. Grinols, E. L. (1995). Gambling as economic policy: Enumerating why losses exceed gains. *Illinois Business Review*, 52(1), 6-12.

*Apart from the social harm that it causes, gambling would be just another inconsequential, low-technology business earning ordinary profits and exhibiting easy entry and exit. It is a logical impossibility for every area to win at the others' expense when gambling is present in every region. For the nation as a whole there will be no net economic development from the spread of gambling, but there will be the creation of a new social problem and the social costs that entails. From a national perspective, the sole benefit of gambling is that it is an additional form of entertainment for the subset users who gamble recreationally and can do so without harming themselves or others. The cost-benefit question is whether another form of entertainment is needed whose social costs are equal to an additional recession every decade.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

175. Grinols, E. L. (1996). Incentives explain gambling's growth. *Forum for Applied Research and Public Policy*, 11(2), 119-124.

*Discusses how various states are benefiting with the introduction of casino gambling. Growth in legalized casino gambling; Result of confluence of natural market forces and economic incentives; Addiction to gambling and other social ills created; Incentives that explain the growth of gambling.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

176. Grinols, E. L. (2004). *Gambling in America: Costs and benefits*. Cambridge, UK: Cambridge University Press.

*Gambling in America carefully breaks new ground by developing analytical tools to assess the benefits and costs of the economic and social changes introduced by casino gambling in monetary terms, linking them to individual households' utility and well-being. Since casinos are associated with unintended and often negative economic consequences, these factors are incorporated into the discussion. The book also shows how amenity benefits - for casinos, the benefit to consumers of closer proximity - enter the evaluation. Other topics include agent incentives*

and public decision making, conceptual clarifications about economic development, cost-benefit analysis, and net export multiplier models. Professor Grinols finds that, in considering all relevant factors, the social costs of casino gambling outweigh their social benefits.

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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177. Grinols, E. L. (2007). Social and economic impacts of gambling. *Research and Measurement Issues in Gambling Studies*. Smith, G., D. Hodgins and R.J. Williams. Boston, MA, Academic Press, 515-539.

*This paper makes four points. First, the difficulty in generating valid cost-benefit information for citizens and government is both political and theoretical in nature. Second, many of the oft-repeated claims about social costs are false (e.g., that stolen property per se does not imply social costs because the thief gets what the victim loses). Third, just as every statistic is unbiased for something, what to count in a cost-benefit study is often not a methodological choice, as it is often asserted, but a matter of what the researcher wants to study. Fourth, good methodology exists for empirical research and has been used in relatively recent studies conducted in the casino postexpansion era for filling in the unknown cost-benefit pigeonholes with numbers.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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178. Grinols, E. L., & Mustard, D. B. (2001). Business profitability vs. social profitability: Evaluating the social contribution of industries with externalities and the case of the casino industry. *Managerial and Decision Economics*, 22(1-3), 143-162.

*Casino gambling is a social issue, because in addition to the direct benefits to those who own and use casinos, positive and negative externalities are reaped and borne by those who do not gamble. To correctly assess the total economic impact of casinos, one must distinguish between business profitability and social profitability. This article provides the most comprehensive framework for addressing the theoretical cost-benefit issues of casinos by grounding cost-benefit analysis on household utility. It also discusses the current state of knowledge about the estimates of both the positive and negative externalities generated by casinos. Lastly, it corrects many prevalent errors in the debate over the economics of casino gambling.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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179. Grinols, E. L., & Mustard, D. B. (2006). Casinos, crime and community costs. *Review of Economics and Statistics*, 88(1), 28-45.

*We examine the relationship between casinos and crime using county-level data for the United States between 1977 and 1996. Casinos were nonexistent outside Nevada before 1978, and expanded to many other states during our sample period. Most factors that reduce crime occur before or shortly after a casino opens, whereas those that increase crime, including problem and pathological gambling, occur over time. The results suggest that the effect on crime is low shortly after a casino opens, and grows over time. Roughly 8% of crime in casino counties in 1996 was attributable to casinos, costing the average adult \$75 per year.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1977-1996

**Impacts:** Social: Increased Crime (casinos increased all crimes except murder, the crime with the least obvious connection to casinos. Most offenses showed that the impact of casinos on crime increased over time, a pattern very consistent with the theories of how casinos affect crime.)

180. Grinols, E. L. and Mustard, D. B. (2008). Correctly critiquing casino-crime causality. *Econ Journal Watch*, 5(1), 21-31.

*We thank Professor Walker for his attention to our paper on casinos and crime, published in the Review of Economics and Statistics (Grinols and Mustard 2006). Professor Walker raises five concerns that are standard in empirical research. We addressed these concerns in the working and published versions of the paper and discussed them with the referees and editor during the review process. Some are well-known statistical issues, some are data limitations, and some are methodology issues. All of his concerns speak of potential problems. He includes no new research or statistical results to provide evidence that the potential problems are actual problems or that they are important. Nevertheless, we respond by taking in turn each of the issues he mentions, explaining how we treated them in our previous work, providing the references to our previous work, and, where appropriate, elaborating on the concerns. Because he presents no new data, no new research, and his criticisms are largely addressed in the working and published versions of our paper, we have no reasons to alter the conclusions of our existing research.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

181. Grinols, E. and Omorov, J. D. (1996). Development of dreamfield delusions: Assessing casino gambling's costs and benefits. *Journal of Law and Commerce*, 16, 49-87.

*The debate over expanding casino gambling includes policy questions relating to the size of harmful externalities it causes and the size of the associated consumer, producer and tax benefits gained from placing casinos in new geographical areas. This paper evaluates the social costs of expanded casino gambling and finds that they are between \$112-\$338 annually per adult. The paper constructs and analyzes a measure of consumer benefits from*

closer proximity to casinos. Producer, consumer, and tax benefits are no greater than \$56. Based on available data, therefore, casino gambling fails a cost-benefit test. The evidence suggests that the type of casinos that have opened in many states do not act as tourist attractions in most areas and therefore are not economic development tools in those cases.

**Type:** Original Research; Methodological Issues

**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States -- Illinois

**Years Impacts Examined:** 1987-1994

**Impacts:** Social: No Impact on Employment

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182. Grinols, E. L. and Omorov, J. D. (1996). Who loses when casinos win? *Illinois Business Review*, 53(1), 7-12.

*Casino gambling remains controversial in Illinois and other states that have introduced it or are considering it. This is mainly because the associated increase in problem and pathological gamblers creates social costs of between \$110 and \$340 per adult per year when averaged over the entire population. Although social costs are the main economic objection to casino gambling, the source of casino revenues matters to understanding gambling and to making decisions about it. For example, the evidence suggests that a large portion of the revenues of expanded casino gambling will come from problem and pathological gamblers. Eight areas are examined to see the effects of casinos on employment. Six areas showed no relationship between the introduction of casinos and increased employment, one showed an employment increase equal to 15% of possible, and another 40%. This suggests that the majority of the revenues earned by casinos came from nearby residents, much of the casino revenues were removed from the county by casino owners, or some combination of both.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Illinois

**Years Impacts Examined:** 1985-1989

**Impacts:** Economic: Changes in Business Revenue (Casinos associated with a drop in general merchandise and miscellaneous retail and wholesale trade within 10 miles of the casino; automotive and filling stations saw a significant increase; effects on other business types unclear, being smaller and both positive / negative).

Social: No Impact on Employment (lack of net job gain in most counties with casinos -- of 8 areas examined, 6 showed no relationship between casinos and increased employment while the other 2 showed a positive relationship)

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183. Grippaios, P., Bishop, P, and Brand, S. (2010). A lottery within a lottery? An examination of the distribution of lottery funds in England. *Applied Economics* 42(1): 63 - 71.

*The UK National Lottery has been in operation since 1994. An examination of the regional distribution of awards per head of population suggests marked spatial disparities with London doing particularly well and Scotland, Northern Ireland, Wales and the North East faring much better than other regions. Such disparities also exist at English Local Authority level with London and some major provincial centres doing much better than more rural authorities. Such inequalities may give grounds for concern, given that they appear to replicate those for other types of Government spending. The results of an empirical model designed to explain the spatial distribution of awards suggest that, in addition to a London effect, levels of deprivation have a positive impact. Another important explanatory variable which has a positive impact on lottery funding is the qualifications of residents which might plausibly reflect the quality of lottery bids received from an area. However, once these factors are taken account of,*

*there is little evidence that rural areas fare badly.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries

**Location(s):** United Kingdom

**Years Impacts Examined:** 1995-2006

**Impacts:** Economic: Public Services (In this article, the main focus has been on a specific welfare issue – whether the regional and local distribution of grant expenditure is ‘fair’. One important aspect of this whether the pattern of expenditure reflects the pattern of ticket sales, a topic which can only be examined at broad regional level. Our conclusion here is that there are clear anomalies.)

184. Griswold, M. T. and Nichols, M. W. (2006). Social capital and casino gambling in U.S. communities. *Social Indicators Research*, 77(3), 369-394.

*This paper empirically analyzes the impact that the spread of casino gambling has on social capital in communities throughout the United States. Social capital is a networking process that translates into an individual's effectiveness in the community and workplace, and binds communities together. Several recent studies have also demonstrated a link between higher levels of social capital and quality of life. In this study, social capital is measured based on six dimensions: trust, civic, volunteerism, group participation, giving, and meeting obligations of family and friends. Using data from the DDB Needham database for the years 1978, 1988, and 1998, regression analysis is conducted on over 300 Metropolitan Statistical Areas throughout the United States to determine the impact that the spread of casino gambling has on social capital. The results of the analysis indicate that the presence of casino gambling significantly reduces social capital when a casino is located within 15 miles of a community, suggesting that a casino's location influences a community's quality of life and should be a consideration when deciding on the merits of gambling legalization.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1978; 1988; 1998

**Impacts:** Social: Decreased Social Capital (The results generally support the work of Putnam (2000) and others in that social capital is declining over time. Most importantly, casino gambling, or factors associated with it, exacerbates this decline. However, the impact is limited geographically.)

185. Gross, M. (1998). Legal gambling as a strategy for economic development. *Economic Development Quarterly*, 12(3), 203-213.

*State and local governments are promoting gambling as a way to raise revenue. Critics believe gambling is not a substitute for economic development and feel casinos, lotteries, and other gambling forms are problematic. Bills that would establish a national commission to study gambling's impact are pending in Congress. Effects of gambling practices require the promotion of well-researched policies on economic development.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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186. Grouse, B. A. (1995). *The location characteristics of card club casinos in Los Angeles County, their use as an economic development tool, and the importance of Asian games*. United States -- California: California State University, Long Beach. M.A.

*The declining manufacturing sector in Los Angeles County in combination with Proposition 13 in 1978, that reduced property taxes, has forced cities to find new sources of employment and tax revenue. Card club casinos have used by some cities in Los Angeles County as an economic development tool to provide lost tax revenue and employment. There are presently seven operational card club casinos in six cities within Los Angeles County. In California, it is illegal to offer unskilled and semi-skilled games including slots, blackjack, craps, and roulette. Asian games are very popular in the card clubs, and attract the county's large Chinese population. This study determined that there is a pattern to where card club casinos are located.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- California

**Years Impacts Examined:** N/A

**Impacts:** N/A

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187. Grun, L. and McKeigue, P. (2000). Prevalence of excessive gambling before and after introduction of a national lottery in the United Kingdom: Another example of the single distribution theory. *Addiction*, 95(6), 959-966.

*Background. According to the single distribution theory advocated by Rose, the prevalence of a deviant condition such as excessive alcohol consumption depends upon the average level of the corresponding characteristic in the population. The objective of this study was to establish whether the single distribution theory applies to gambling behaviour. Methods. Household gambling expenditure in the United Kingdom was examined using Family Expenditure Survey data collected before and after the introduction of a national lottery in November 1994. Results. In cross-sectional analyses, the mean (or median) household expenditure on gambling for each region predicted the prevalence of excessive gambling in that region: the slope of the relationship in 1995/2013/96 was equivalent to an increase of 1.2 (95% CI 0.72/0.13/1.7) points in the percentage of households gambling more than 10% of income for every increase of £1 in mean household gambling expenditure. The introduction of the national lottery was associated with an increase in mean household gambling expenditure from £1.45 to £3.81 per week, and an increase in the proportion of households gambling more than 10% of total income four-fold from 0.4% to 1.7%. Among households with income of less than £200/week, the proportion gambling more than 10% of their income increased from 0.6% to 3.2%. Interpretation. The single distribution theory applies to gambling behaviour. The increase in average gambling expenditure associated with the introduction of a national lottery in the United Kingdom has led to a pronounced increase in the prevalence of excessive gambling, especially in low-income households. This is likely to increase the prevalence of gambling disorders and to exacerbate social inequalities in health.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries; All Gambling

**Location(s):** United Kingdom

**Years Impacts Examined:** 1993-1996

**Impacts:** Social: Increased Problem Gambling and Related Indices (when average spending on gambling was

doubled by the introduction of a national lottery, there was a four-fold increase in the proportion of households where gambling expenditure was excessive.)

188. Ha, I. S. and Ullmer, J. (2007). The economic effects of Harrah's Cherokee Casino and Hotel on the regional economy of Western North Carolina. *Journal of Economics & Economic Education Research*, 8(2), 33-46.

*The Eastern Band of Cherokee Indians opened their casino in 1995, and entered into a management agreement with Harrah's in 1997 to manage the casino operation. This paper explores the major components of spending and their impact on a seven county region in Western North Carolina. The payment streams include wages and salaries paid to Harrah's Cherokee Casino and Hotel employees, operational spending paid to businesses who supply the Harrah's Cherokee and Hotel with food, beverages, and services, revenue distribution for Tribal government services, revenue distribution to adult Tribal members from the per-capita account, and distributions from the minors-account to Tribal members who have recently come of age. We deviate from existing research in two ways: First, we use existing commuting patterns to define the relevant region. Second, we estimate the economic impact of payments to minors when they reach majority age. The transference of this wealth to current disposable income is significant. This "wealth effect," which has not been appropriately incorporated in any economic impact studies of the gaming industry, is included in our research.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- North Carolina -- Western Counties

**Years Impacts Examined:** 2003

**Impacts:** Economic: Increased Infrastructure Investment (positive gross economic impact); Increased Business Revenue (positive gross economic impact; particularly in the service sector which accounted for 2/3rds of job growth) \*\*\*measures are for gross economic impact, NOT net impact. Increased Personal Income.

Social: Increased Employment (increased by an estimated 4,823 jobs)

189. Hakim, S. and Buck, A. J. (1989). Do casinos enhance crime? *Journal of Criminal Justice*, 17(5), 409-416.

*This article analyzes the possible impact of the 1978 introduction of casino gambling in Atlantic City on crime in that region. Pooled time-series cross-sectional data from sixty-four localities for the years 1972 to 1984 were used to investigate four types of property crimes and total violent crimes. The results suggest spatial crime spill-over from Atlantic City, where violent crime diminished most rapidly, followed by robberies and auto thefts. Larcenies declined least rapidly. The greatest postcasino crime increase was observed for violent crimes and auto thefts and the least for burglaries. A one percent increase in the distance from Atlantic City was associated with greater reduction in all crimes than was a one percent increase in police outlays.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- New Jersey -- Atlantic City

**Years Impacts Examined:** 1972-1984

**Impacts:** Social: Increased Crime (The levels of all crimes appear to have been higher in post-casino years, 1978 to 1984, than in the earlier period of 1972 to 1977, with other factors controlled. The study also shows the possible casino-related export of crime from Atlantic City to localities in its vicinity.)

190. Hall Aitken (2006). *The social and economic impacts of regional casinos in the UK*. Glasgow: Hall Aitken.

*This report aims to identify and quantify the impact of regional casino development. It examines the assumption that such development is beneficial to local economies and communities, particularly in relation to anticipated regeneration benefits.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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191. Hall, C. M. and Hamon, C. (1996). Casinos and urban redevelopment in Australia. *Journal of Travel Research*, 34(3), 30-36.

*The role of casinos as a development tool is undergoing a transformation that reflects broader shifts in the nature of urban governance. The potential role of casino development as a strategy for the economic rejuvenation of an urban destination is now well recognized. In Australia, the last 5 years has witnessed a new stage in the granting of casino licenses, whereby - in addition to traditional factors such as government increasing its tax revenues and the argument that casinos would attract tourists - casino development is now an integral component of urban redevelopment and reimagining strategies. The interrelationship between gaming tourism and urban development within the Australian context is examined. Overall, gaming tourism has become an essential part of the economic development strategies of the Australian local state and of the rejuvenation of inner-city and industrial lands in particular. Casinos have therefore become integrated with urban revitalization measures.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Australia

**Years Impacts Examined:** N/A

**Impacts:** N/A

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192. Hammer, R. D. (2001). Does Internet gambling strengthen the U.S. economy? Don't bet on it. *Federal Communications Law Journal*, 54(1), 103-127.

*Commercial gambling in the United States is a mammoth industry. In the past few decades, the United States developed from a country with few gambling options to one permitting some form of legalized gambling in almost every state. Presently, a new wave of technology affects this industry. Legislators and regulators must deal with the phenomenon of Internet gambling. This Note asserts that Internet gambling must be curbed to lessen its negative impact on the American economy. Many state and local governments are dependent on tax revenues associated with traditional forms of gambling. Internet gambling not only deprives the economy of these valuable tax revenues, but also costs the economy valuable jobs and assorted fees associated with traditional gambling. In order to lessen its negative impact on the economy, Internet gambling must be more judiciously regulated in the United States.*

**Type:** Secondary Analysis

**Gambling Format:** Internet Gambling

**Location(s):** N/A



**Years Impacts Examined:** N/A

**Impacts:** N/A

193. Hare, S. (2009). *A study of gambling in Victoria: Problem gambling from a public health perspective*. Melbourne, Australia: State of Victoria, Department of Justice.

*This report presents findings of a study of the epidemiology of problem gambling in Victoria. Epidemiology is the study of the distribution and determinants of health related states or events in specified populations, and the application of this study to control health problems. In this context, the current study investigated the prevalence and distribution of problem gambling in Victoria, along with the various factors associated with increased risk for problem gambling. The current study takes a very different and perhaps unique approach to examining problem gambling in Victoria. Unlike past studies, this study examined gambling patterns in the community from a population health perspective. This involved not only measuring the prevalence of different forms of gambling, but also importantly, the health and well-being determinants of problem gambling. From this viewpoint, problem gambling is viewed as an important health and well-being issue for Victorians and similar to other health issues, is influenced by a diverse range of health, social and other determinants.*

#### **GOOD QUALITY**

**Type:** Original Research

**Gambling Format:** All Gambling

**Location(s):** Australia -- Victoria

**Years Impacts Examined:** 2008

**Impacts:** N/A

194. Hashimoto, K. and Fenich, G. G. (2003). Does casino development destroy local food and beverage operations?: Development of casinos in Mississippi. *Gaming Law Review*, 7(2), 101-109.

*Over the last decade, there has been a boom in casino gambling and it has been one of the fastest growing industries in the U.S. Proponents have pointed to job development and economic growth as rationales for entry into new jurisdictions. In addition to social and moral retorts, opponents have cited the negative impact on local restaurants as a major reason for limiting casino development. It is claimed that casinos have a detrimental effect on food and beverage businesses in a community. While this rationale has been put forth many times, there is little empirical evidence to either prove, or disprove, this claim. This article analyzes the effects of casino development on food and beverage activity in the state of Mississippi. More specifically, it will assess the levels of economic activity, in the form of employment, payroll, and number of establishments by the food and beverage industry, both before and after legalization of casino gaming.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Mississippi

United States -- Mississippi -- Tunica County

United States -- Mississippi -- Warren County

United States -- Mississippi -- Washington County

United States -- Mississippi -- Harrison County

**Years Impacts Examined:** 1988-1995

**Impacts:** Economic: Increased Business Starts (activity of the local food and beverage industry increases: the

number of establishments increases, the number of people employed increases, and payroll increases); Increased Business Revenue (see above comment)

Social: Increased Employment (see above comment)

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195. Hawke, A. (2000). *Measuring the impact of gambling: An economist's view. Hawke Institute Working Paper Series No. 4.* Magill, South Australia: Hawke Institute, University of South Australia.

*In a recent draft report on Australia's gambling industry, the Australian Productivity Commission found that, on balance, gambling has a positive impact on Australia's economy. This paper analyses the economic benefits and costs of gambling in Australia, while also acknowledging that it is very difficult to assign a monetary value to social and personal costs. It concludes that, if the position of 'problem gamblers' (those addicted to gambling) is included in the analysis, gambling may well be an economic burden to our society.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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196. Hayward, K. and Colman, R. (2004). *The costs and benefits of gaming: A literature review with emphasis on Nova Scotia.* Glen Haven, NS: GPI Atlantic.

*In July 2004, GPI Atlantic produced a review of the literature on the costs and benefits of gambling for the Nova Scotia Gaming Foundation. The review focused on methodological issues and on the applicability of existing materials to Nova Scotia, and was seen as a preliminary step to a potential full-fledged future analysis of the costs and benefits of gambling in Nova Scotia. It was hoped that this future analysis would provide much needed information on the full medical, social, economic, and productivity costs of problem gambling in the province, and would also identify advantages to society, including generation of tax revenues that can be used for the public good, and prevention of organized crime.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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197. Henriksson, L. E. (1996). Hardly a quick fix: Casino gambling in Canada. *Canadian Public Policy*, 22(2), 116-128.

*Casino gambling is proliferating in Canada despite evidence that its ability to generate net increases in tax revenues and employment is uncertain. This paper reviews the principal costs and benefits that are relevant in evaluations of casino proposals, along with pertinent literature. Principal recommendations include more scholarly cost-benefit studies. A regulatory strategy and public consultation are also essential, although the difficulties associated with both should always be recognized. All in all, the casino's usefulness as a policy instrument appears to be marginal, particularly in the long run.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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198. Henriksson, L. E. (2001). Gambling in Canada: Some insights for cost-benefit analysis. *Managerial and Decision Economics*, 22(1-3), 113-123.

*Issues concerning the characteristics of the gambling market of Canada are discussed. Particular attention is given to analyses of the relationships between costs and benefits of gambling, as well as to developing a framework of the social, health and economic impact of gambling.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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199. Henriksson, L. E. and Lipsey, R. G. (1999). Should provinces expand gambling? *Canadian Public Policy*, 25(2), 259-275.

*State-sponsored gambling is now widespread in both Canada and the United States. The purpose of this paper is to provide a critical analysis of gambling as a revenue-raising instrument for government. We begin by outlining key principles, and then demonstrate how a realistic appraisal of the economic and employment effects of expansion can be achieved. Next, we evaluate gambling as a source of revenue and jobs. A discussion of cost issues and a brief treatment of First Nations' gambling follows. Recommendations complete the paper.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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200. Hicks, M. J. (2003). A quasi-experimental analysis of the impact of casino gambling on regional economic performance. *National Tax Association 66th Annual Conference on Taxation*.

*This paper measures the regional impact of casino gambling on several measures of regional economic performance. The analysis was performed on cross-sectional time series from 1969 through 2001. Employing a quasi-experimental method this study illustrates a method of estimating regional impacts in geographically non-conterminous counties, thus reducing data requirements. From this sample a time-space recursive model with fixed effects was employed to test casino impacts. These tests were extended to the analysis of Colorado, where a test of conterminous counties mirrored the results from the quasi-experimental technique. The study finds no net impact of gambling on per capita income or employment. However, there were large asymmetric sectoral shifts in personal*

income, with increases in local government (31%) income, and decreases in state government (10%) and retail income (32%) in the sampled counties. Labor supply constraints are attributed to the finding of no net county level impacts in this sample.

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

United States -- Colorado

**Years Impacts Examined:** 1969-2001

**Impacts:** Economic: Changes in Government Revenue; Decrease in Business Revenue (there is a profound decline in retail trade, a phenomenon that has been noted before [Garrett, 2003]).

Social: Changes in Employment (There are not statistically significant impacts of gambling to aggregate measures of employment and personal income when the model is corrected for both time and spatial autocorrelation. Within a county, however, there is tremendous sectoral adjustment.)

201. Hinch, T. (2003). *Casino patrons, travel behaviour, place attachment, and motivations: A study of Alberta residents*. Edmonton, AB: Alberta Gaming Research Institute.

*This study is guided by the question of what role "place or destination" plays in the behaviour of Alberta residents who visit casinos on their travels. More specifically, the study is designed to: (1) identify the casino related travel behaviour of Alberta residents, (2) examine the importance of place attachment and mode of experience in relation to casino patronage by Alberta residents, and (3) discover the motivations of these casino gamblers.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Canada -- Alberta

**Years Impacts Examined:** 2002

**Impacts:** N/A

202. HLT Advisory Inc. (2008). *Economic impacts of the Canadian gaming industry: Key findings report*. Toronto, ON: Canadian Gaming Association.

*This study, Economic Impact of the Canadian Gaming Industry, is another of a series of science and fact-based national studies and surveys relating to Canada's gaming industry that the Canadian Gaming Association (CGA) commissions. The purpose of this Study is to provide a clear, comprehensive picture of the magnitude of the gaming industry and its economic impacts across the country. Although not a study or analysis of responsible gaming, the study includes a commentary on the responsible gaming programs and policies undertaken by governmental agencies.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** All Gambling

**Location(s):** Canada

**Years Impacts Examined:** 2006

**Impacts:** Economic: Increased Public Services (Gaming generates \$8.6 billion annually to fund government and community programs and services); Increased Infrastructure Investment (Based on the initial cost of capitalized

assets as contained in the annual reports of the various corporate entities that operate gaming activity in Canada, the industry had invested \$9.5 billion in capital assets by the end of 2006)

Social: Increased Employment (Over 52,000 jobs are supported by direct labour income in the industry as a whole; directly supports more than 135,000 full-time jobs and more than 267,000 jobs including indirect and induced impacts)

203. Ho, Y. (2007). *Benefits and costs of legalized gaming in Penghu as perceived by Taiwanese people*. United States -- Nevada: University of Nevada, Las Vegas. M.S.

*This study evaluates attitudes and perceptions of residents in Penghu County and the main island of Taiwan regarding benefits and costs of legalized gaming in Penghu County. Surveys were conducted by using convenient sampling in both Taiwan's main island and Penghu County. Results indicate residents in Penghu and residents in Taiwanese have no significant difference in supporting legalized gaming. Residents in both locations show a positive attitude toward the legalized gaming based on the mean score from the test. Results also indicate that there are three socio-demographic groups have significantly different opinions in supporting legalized gaming. Results also point out the impacts that those three groups are concerned about regarding benefits and costs of legalized gaming. In addition, results may provide the Taiwanese Government some directions for improving residents' perceptions toward the benefits and costs of legalized gaming once the Taiwanese Government decides to use legalized gaming as a means to improve the community's economy and tourism development.*

**Type:** Original Research; Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

204. Hong, S.-K. and Jang, H. (2005). Factors influencing purchasing time of a new casino product and its managerial implications: An exploratory study. *Journal of Travel Research*, 43(4), 395-403.

*After many debates, the Small Casino, the first casino open to the Korean public, was established in 2000. This study was an attempt to determine who the initial visitors were and the factors that motivated them to visit the casino. More specifically, the research aimed to determine the factors that influence the amount of time that an individual takes to adopt participation in casino gambling. The study found that the level of gambling addiction was the most influential factor, which led to concern about the negative impacts of casino gambling. Cognitive biases, sensation seeking, and impulsiveness were found to exert significant influence on the time taken until the first visit. The research also suggests various managerial implications of the findings based on the survival analysis and the characteristics of visitors.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Korea

**Years Impacts Examined:** 2002

**Impacts:** Social: Problem Gambling and Related Indices (Most of the early visitors to the casino were still considering casino gambling as a way of making money, and the evidence indicates that many of them come back to the casino repeatedly.)

205. Honoré, P. A., Simoes, E. J., Moonesinghe, R., Wang, X. and Brown, L. (2007). Evaluating the ecological association of casino industry economic development on community health status: A natural experiment in the Mississippi Delta Region. *Journal of Public Health Management and Practice*, 13(2), 214-222.

*Objectives of this study were to examine for associations of casino industry economic development on improving community health status and funding for public health services in two counties in the Mississippi Delta Region of the United States. An ecological approach was used to evaluate whether two counties with casino gaming had improved health status and public health funding in comparison with two noncasino counties in the same region with similar social, racial, and ethnic backgrounds. Variables readily available from state health department records were used to develop a logic model for guiding analytical work. A linear regression model was built using a stepwise approach and hierarchical regression principles with many dependent variables and a set of fixed and nonfixed independent variables. County-level data for 23 variables over an 11-year period were used. Overall, this study found a lack of association between the presence of a casino and desirable health outcomes or funding for public health services. Changes in the environment were made to promote health by utilizing gaming revenues to build state-of-the-art community health and wellness centers and sports facilities. However, significant increases in funding for local public health services were not found in either of the counties with casinos. These findings are relevant for policy makers when debating economic development strategies. Analysis similar to this should be combined with other routine public health assessments after implementation of development strategies to increase knowledge of health outcome trends and shifts in socioeconomic position that may be expected to accrue from economic development projects.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Mississippi -- Tunica County

United States -- Mississippi -- Tallahatchie County

United States -- Missouri -- Mississippi County

United States -- Missouri -- Pemiscot County

**Years Impacts Examined:** 1993-2004

**Impacts:** Economic: No Impact on Public Services

Social: No Impact on Public Health (In this study, improvements in health outcomes were not identified nor was funding substantially increased for local public health services as a result of casino gaming. Generally, there was a lack of association between the presence of a casino and positive changes in healthcare delivery and health status.)

206. Hotel Employees & Restaurant Employees International Union (2003). *Tribal casinos and their impacts on a California community: A focus on the Palm Springs area in the Coachella Valley and the casino operations of the Agua Caliente Band of Cahuilla Indians*. Los Angeles, CA: Hotel Employees and Restaurant Employees International Union.

*The research in this report identifies the impacts of tribal gaming and its potential growth on local communities with a focus on the Palm Springs area in the Coachella Valley and the gaming operations of the Agua Caliente Band of Cahuilla Indians.*

**Type:** Original Research

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- California -- Palm Spring Area

**Years Impacts Examined:** 1989-2001

**Impacts:** Economic: Decreased Public Services (Tribal casinos impact state and local public services-increasing the

costs and potentially lowering the quality of service); Increased Infrastructure Costs (Negative impacts include greater law enforcement and fire protection needs, traffic mitigation and road maintenance, water and sewage extension and maintenance, augmented social services -- including family health care and affordable housing -- open space conservation and the added cost to infrastructure extension.)

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207. Hsu, C. H. C. (1998). Gaming as an economic development tool: A case study of two Iowa communities. *Pacific Tourism Review*, 1, 211-224.

*This study identified both the actual and business owners' perceived economic impacts of legalized riverboat gaming on two communities in southeastern Iowa. Actual economic impacts were measured by constant total retail sales, number of retail firms, economic pull factors, unemployment rates, and hotel/motel tax revenues in a 10-year period. A survey was sent to 519 business owners in those two cities and communities within 20 miles of the cities. Results indicated that gaming in the two communities had limited impact on local tourism and economic development. The majority of business owners perceived no change in their business level; however, business owners' perception of business level change appeared to be influenced by their opinions of legalized gaming. For communities and countries considering gaming as a tourism and economic development tool, a long-term tourism development plan is needed. Gaming is not the magical solution to economic problems nor the answer to lack of tourism development.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States -- Iowa -- Burlington

United States -- Iowa -- Fort Madison

**Years Impacts Examined:** 1986-1996

**Impacts:** Economic: Increased Government Revenue (state, county & city governments received additional tax revenues because of gaming tax receipts); Increased Business Starts (total number of retail firms increased); No Impact on Business Revenue (hotel/motel tax collected had minimal relationship to the availability of the gaming operation; limited consumer spending in community businesses)  
Social: Increased Negative Attitudes (business owners tended to be slightly negative overall about the introduction of casinos)

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208. Hsu, C. H. C. (1998). Impacts of riverboat gaming on community quality. *Journal of Hospitality and Tourism Research*, 22(4), 323-337.

*This study, examining two southeastern Iowa riverboat communities, identified the impact of the riverboat casino on 25 community quality attributes, as perceived by community residents. Tax revenue generation was the only attribute improved as a result of the riverboat casino. All other attributes were not changed. The community quality attributes were categorized into six factors: Free of Crime, Attractiveness, Economy, Community Activities, Public Services, and Hospitality. Those whose highest education level attained was a high school diploma, who had visited the casino, who visited the casino more often, and who supported the legalization of gaming in the state perceived the impact of the riverboat casino more positively.*

**Type:** Original Research

**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States -- Iowa -- Burlington

United States -- Iowa -- Fort Madison

**Years Impacts Examined:** 1996

**Impacts:** Social: No Impact on Quality of Life (Results of the study showed that "tax revenue generation" was the only community quality attribute improved since the introduction of the riverboat casino. All other attributes were not changed as a result of the gaming.)

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209. Hsu, C. H. C., Ed. (1999). *Legalized casino gaming in the United States: The economic and social impact*. Bingham, NY: Haworth Press.

*This volume comprises case studies, data, and surveys concerning the history, development, legislation and economic and social impacts of riverboat, land-based and Native American casino gaming. It evaluates the pro's and con's of the industry, including: reviewing changes in the gaming laws and regulations in particular regions and segments of the industry; explaining laws and regulations by state; and examining positive and negative social impacts of gaming, including crime, quality of life, community services, availability of entertainment, recreation and cultural activities, community attractiveness, local resident attitudes; and pathological gambling. The book is organized into three sections: history, development, and legislation; economic impacts; and social impacts. Within each section are four chapters that focus on four particular areas: Las Vegas gaming; Atlantic City gaming; Native American gaming; and riverboat and landbased non-Native American gaming.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos -- Riverboat; Indian Gaming -- Casinos

**Location(s):** United States

United States -- Nevada -- Las Vegas

United States -- New Jersey -- Atlantic City

**Years Impacts Examined:** 1978-1996

**Impacts:** Economic: Increased Government Revenue; Changes in Business Revenue (mixed impacts)

Social: Increased Employment

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210. Hsu, C. H. C. (2000). Riverboat casinos' impact on host communities: Comments from business owners and residents. *Asia Pacific Journal of Tourism Research*, 5(1), 8-15.

*A qualitative component was incorporated in a gaming impact study to explore how business owners and residents make sense of their lives and experiences with the presence of a riverboat casino in their community. Data collected were categorized to summarize their perceptions on the effect of riverboat casinos on their businesses, their lives, and the community. Most respondents' comments represented a balanced view of the casinos' influence. Increased gambling addiction appeared to be their major concern. This article provides insights of the real feelings of people who were affected most by the gaming development.*

**Type:** Original Research

**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States -- Iowa

**Years Impacts Examined:** 1998?

**Impacts:** Social: No Impact on Attitudes (Riverboat casinos, for the most part, had no direct impact on respondents' personal lives or businesses.)

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211. Hsu, C. H. C. (2000). Residents' support for legalized gaming and perceived impacts of riverboat casinos: Changes in five years. *Journal of Travel Research*, 38(4), 390-395.



*Modern riverboat casinos have been in operation since 1991. This study investigates the changes in residents' perceived impacts of riverboat casinos on community quality over time. Data were collected in 1993 (n = 231) and 1998 (n = 272) from randomly selected residents in Iowa and Illinois. Residents were significantly less positive about the legalization of gaming in these states in 1998 than in 1993. Of the 24 community quality attributes rated, five underlying factors were identified, and three of these were rated as significantly worse in 1998 than in 1993. Multiple linear regression analysis results indicate that respondents' perceptions on "free of crime" and "community amenities and activities" were significant predictors of their support for legalized gaming. Implications for gaming proponents and opponents are provided.*

**Type:** Original Research

**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States -- Iowa -- Quad Cities

United States -- Iowa -- Bettendorf

United States -- Iowa -- Davenport

United States -- Illinois -- Moline

United States -- Illinois -- Rock Island

**Years Impacts Examined:** 1993; 1998

**Impacts:** Social: Increased Negative Attitudes (Results indicate that respondents' support for legalized gaming and tourism development declined over the 5-year period. Respondents' agreement with the statement "the riverboat casino has helped improve the local economy" also declined from 1993 to 1998.)

212. Hsu, C. H. C., Ed. (2006). *Casino industry in Asia Pacific: Development, Operation, and Impact*. New York: Haworth Hospitality Press.

*This book details the history, operational issues, and impact of casino gaming in the Asia Pacific region. Each chapter in section I (chapters 1-5) includes a comprehensive history of the development of gaming for a particular location, which includes Australia, South Korea, Macao, Japan and Southeast Asia. Laws and regulations are also reviewed for each location to report changes and document current status. Each chapter in section II (chapters 6-9) examines an important casino operational issue, which includes effective regulation, licensing and due diligence, internal control and auditing, and rolling commissions. Examples are provided to illustrate the importance of proper operational control. Section III (chapters 10-13) reviews economic and social impacts of gaming in Australia and South Korea; gaming and Chinese culture are also discussed to illustrate the intertwining relationship between gaming and people's daily lives.*

**Type:** Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

213. Human Services Administration of Lincoln Nebraska and Poykko-Post, J. (2004). *Socioeconomic indicators of legalized gambling in Lincoln/Lancaster County, Nebraska. Prepared for the Joint Budget Committee by the Human Services Administration*. Lincoln, NE: Human Services Administration.

*This study provides a compilation of the annual change (generally from 1990 to 2002) in 29 selected indicators for Lancaster County. These indicators include: persons, age, households and families, employment/unemployment (labor force), employment by sector (work force), retail sales, earnings, transfer payments and personal income,*

household income, poverty, bankruptcies, payday lenders, bad checks, insurance fraud, forgery, embezzlement and fraud, burglary, robbery and larceny, traffic accidents and drunk driving, child abuse and neglect, domestic assault, divorce, suicide, and gambling treatment. These indicators, for the most part, were contained in the previous two studies, and reflect a time when casinos, video slots or other forms of expanded gambling are not legal in the State.

**Type:** Original Research; Secondary Analysis

**Gambling Format:** All Gambling (including legalized formats, illegal gambling via bookmakers, online gambling, and gambling at casinos in other states, etc.)

**Location(s):** United States -- Nebraska -- Lancaster County

**Years Impacts Examined:** 1990-2002

**Impacts:** N/A (baseline data establishment)

214. Hunsaker, J. (2001). The impact of riverboat casinos on the demand for gambling at casino resorts: A theoretical and empirical investigation. *Managerial and Decision Economics*, 22(1-3), 97-111.

*Conditions are provided under which a casino resort enjoys an increase in demand following the entry of a riverboat casino in a separate geographical market. Gambling is modeled as an "experience good," whereby consumers are uncertain of the benefit they will receive from the activity prior to engaging in it. The riverboat casino provides nearby consumers with the opportunity to experience gambling without having to incur large transportation costs. Those consumers who discover that they enjoy gambling travel to the casino resort for a vacation next period. The theoretical results are supported by empirical evidence for casinos in Las Vegas.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States

United States -- Nevada -- Las Vegas

United States -- New Jersey -- Atlantic City

**Years Impacts Examined:** 1978-1998

**Impacts:** Economic: Increased Government Revenue [Implied] (Demand for gambling at casinos along the Las Vegas strip increased after riverboat gambling was introduced. As the casinos in Las Vegas compete in the destination resort market, they benefit from the exposure to gambling that the riverboat casinos provide to the residents of the midwest and south. This exposure does little for the Atlantic City market, which primarily attracts 'day trippers' from the east coast. Our empirical results indicate that Atlantic City casinos did not experience any change in demand following the entry of riverboat casinos.)

215. Jacques, C. and Ladouceur, R. (2006). A prospective study of the impact of opening a casino on gambling behaviours: 2- and 4-year follow-ups. *The Canadian Journal of Psychiatry*, 51(12), 764-773.

*Objective: It is widely believed that the rate of pathological gambling is related to the accessibility and availability of gambling activities. Few empirical studies have yet been conducted to evaluate this hypothesis. Using a longitudinal prospective design, the current study evaluates the impact of a casino in Canada's Hull, Quebec region. Method: A random sample of respondents from Hull (experimental group) and from Quebec City (comparison group) completed the South Oaks Gambling Screen (SOGS) and gambling-related questions before the opening of the Hull Casino (pretest), 1 year after the opening (posttest), and on follow-up at Years 2 and 4. Results: Although, 1 year after the opening of the casino, we did observe an increase in playing casino games and in the maximum amount of money lost in 1 day's gambling, this trend was not maintained over time (2- and 4-year follow-ups). In the Hull cohort, the rate of at-risk and probable pathological gamblers and the number of criteria on the SOGS did*

*not increase at the 2- and 4-year follow-ups. The residents' reluctance to open a local casino was generally stable over time following the casino's opening. Conclusion: The discussion raises different explanatory factors and focuses on the context of the Regional Exposure Model as a potentially more applicable measure of studying the expansion of gambling. (PsycINFO Database Record (c) 2009 APA, all rights reserved) (journal abstract).*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Canada -- Quebec -- Hull

**Years Impacts Examined:** 1996; 1997; 1999; 2001

**Impacts: Social:** Increase and then No Impact on Problem Gambling and Related Indices (One year after the opening of the casino, results indicated a significant increase in casino gambling activities and in the amount of money lost to gambling of the Hull, compared with the Quebec, respondents. However, contrary to our hypotheses, this trend was not maintained 2 and 4 years later.)

216. Jacques, C., Ladouceur, R. and Ferland, F. (2000). Impact of availability on gambling: A longitudinal study. *Canadian Journal of Psychiatry*, 45(9), 810-815.

*Objective: Legalized gambling opportunities have markedly increased in most industrialized countries. While most authors agree that the rate of pathological gamblers is related to the accessibility of gambling activities, no published studies have yet empirically estimated the impact of the introduction of new gambling activities within a longitudinal study. Thus, we evaluate the impact of the opening of a casino on gambling activities among nearby inhabitants. Method: A random sample of 457 respondents from the Hull area (experimental group) and 423 respondents from the Quebec City area (control group) completed the South Oaks Gambling Screen and related questions, both before the opening of the Casino de Hull and 1 year later. Within each household contacted, a resident was randomly chosen by selecting the adult whose birthday was next. Results: The experimental group exposed to the new casino showed a significant increase in 1) gambling on casino games, 2) the maximum amount of money lost in 1 day on gambling, 3) reluctance toward the opening of a local casino, and 4) the number of participants who reported knowing a person who has developed a gambling problem in the last 12 months. Conclusion: The impact of legalized gambling is discussed in relation to the availability of gambling.*

#### **GOOD QUALITY**

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Canada -- Quebec -- Hull

**Years Impacts Examined:** 1996; 1997

**Impacts: Social:** Increased Negative Attitudes (After living for more than 1 year with a casino in their neighborhood, Hull respondents perceived significantly more negative effects at an economic level than did Quebec respondents.); Increased Problem Gambling and Related Indices (The results confirm the hypothesis that an increase in the availability of gambling activities is followed by increased participation in these activities, even within as short a period as 1 year. The study design allows us to demonstrate a causal link between the establishment of the casino and a subsequent increase in self-reported gambling levels.)

217. Janes, P. L. and Collison, J. (2004). Community leader perceptions of the social and economic impacts of Indian gaming. *Gaming Research & Review Journal*, 8(1), 13-30.

*The development of casino gambling in recent years whether through state-regulated or Native American gaming operations has resulted in increased concern over social and economic impacts. This study assessed perceptions of*

*eight community leaders as to how the area was affected by a major expansion of a Native American casino. Leaders were interviewed prior to and several years after the completed expansion. Leaders felt the expansion had contributed positively to the community but noted increased social concerns. Overall, economic impacts were positive, however, the uniqueness of a Native American casino operation posed other challenges.*

**Type:** Original Research

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- Midwest

**Years Impacts Examined:** 1995; 2000

**Impacts:** Social: Increased Positive Attitudes (Overall perception that community life was enhanced as a result of casino expansion; positive perception of economic impacts -- e.g., employment opportunities, wages, property values, etc.; perception that social issues -- e.g., problem gambling, divorce, theft -- had also developed as a result of casino gambling).

218. Janisch, R. F. (2006). Sovereignty, Indian gaming, and economic development on the Lake Traverse Reservation of the Sisseton-Wahpeton Sioux Tribe (Oyate). *American Behavioral Scientist*, 50(3), 353-372.

*This study analyzes Indian gaming in South Dakota--specifically, that of the Sisseton-Wahpeton Sioux Tribe (SWST)-- via library material, telephone and taped interviews, nonparticipant/participant observation, newspaper and administrative reports, and public law statutes. Questions were developed, pretested, and applied to form a gaming narrative or voice of the SWST and its constituency. The article argues that tribes must define, exert, and use their political sovereignty to engage in positive, effective, and sustainable aspects of self-determination. Through the lens deemed most appropriate for the tribe, the SWST plays a vital role in overall economic development on and off the reservation. To be effective, the tribe must be the principal actor for positive economic development, the catalyst for recruiting outside enterprises, and the regulator/monitor of a positive economic development initiative and must develop/maintain the ability to define its organizational structures and engage in those day-to-day activities that advance overall tribal economic development policies and activities.*

**Type:** Original Research

**Gambling Format:** Bingo; Indian Gaming -- Bingo

**Location(s):** United States -- South Dakota -- Lake Traverse Reservation

**Years Impacts Examined:** 2001

**Impacts:** N/A

219. Jawad, C. and S. Griffiths (2010). Taming of the casino dragon. *Community, Work & Family* 13(3): 329 - 347.

*The Gambling Act 2005 reformed the gambling market with far-reaching implications for the market as a whole, and casino gambling in particular. A small survey was conducted in Swansea to review community perceptions of casinos in their locality. This paper examines the alleged benefits of gambling and to discuss the concern that the Gambling Act will be likely to harm those who are most deprived and vulnerable in society. This paper explores the advantages and disadvantages to the establishment of a casino and its perceived impacts on local families and communities. Issues such as fear of an increase in crime and increases in poverty, ill-health and family breakdown were all important to respondents and are discussed in this paper. In summary, the majority of all respondents had a negative attitude towards gambling, which reflects the findings of the British Gambling Prevalence Survey. During conversations it became evident that the respondents' attitudes towards the casino gambling were formed based on their perceptions and images of a casino and the gambling industry in general. A lot of respondents said that their perceptions of Internet gambling were predominantly based on the media reporting. Some of the respondents*

mentioned that their personal gambling experiences and observations had also shaped their opinions on the survey responses.

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United Kingdom - Swansea

**Years Impacts Examined:** 2008?

**Impacts:** Social: Public Attitudes (In summary, the majority of all respondents had a negative attitude towards gambling, which reflects the findings of the British Gambling Prevalence Survey. During conversations it became evident that the respondents' attitudes towards the casino gambling were formed based on their perceptions and images of a casino and the gambling industry in general.)

220. Jensen, K. and Blevins, A. (1998). *The last gamble: Betting on the future in four Rocky Mountain mining towns*. Tuscon, AZ: University of Arizona Press.

*From the onset of legalized gambling in the Rocky Mountains, authors Katherine Jensen and Audie Blevins collected economic data, interviewed officials and citizens, and perused countless historical sources. Their efforts have resulted in a unique account detailing the dramatic changes in communities that stake their economic and cultural futures solely on the gambling industry. The Last Gamble: Betting on the Future in Four Rocky Mountain Mining Towns explores changing economic realities in communities and promises to be a solid addition to the new social history of the West. Concentrating on sharply focused, regional case studies, the authors incorporate research from wider national and historical angles. The outcome is a critical perspective on social change and a thorough assessment of the impacts of gaming on civic groups and institutions. Jensen and Blevins offer readers clear insight into the dilemmas faced by the four communities, a clarity that is powerfully enhanced by their personal ties to the people and places. The Last Gamble is an intriguing work that will appeal to all readers with an interest in the modern American West and will prove especially valuable to policymakers, preservationists, historians, and sociologists.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- South Dakota -- Deadwood

United States -- Colorado -- Cripple Creek

United States -- Colorado -- Black Hawk

United States -- Colorado -- Central City

**Years Impacts Examined:** 1990-1996

**Impacts:** Economic: Increased Government Revenue (increase for state in particular; not for local governments); Change in Business Starts and Business Failures (local retail and wholesale stores were cannibalized by gaming operations; by the end of 1st year in Deadwood, 78 businesses had been converted to casinos); Change in Business Revenue (positive for tourism services); Increased Property Value; Increased Infrastructure Costs (increased to service tourism)

Social: Increased Crime

221. Johnson, D. (2002). *Measuring the local impact of electronic gaming machines*. Melbourne Institute Working Paper No. 13/02. Melbourne, Australia: Melbourne Institute.

*Recent growth in the utilisation of Electronic Gaming Machines (EGMs) has led to community disquiet about attendant problems of alleged loss of community standards, problem gambling and losses by retailers and other*

local businesses. Recent legislation provides an opportunity for local councils to object to any proposals to increase numbers of EGMs on the grounds of social and economic impact on the local community. The Pokie Application Research Kit (PARK) is a software tool that aims to help local councils determine the local social and economic impact of the introduction of additional EGMs to venues within their boundaries. PARK evaluates the benefit of additional EGMs by tracing the way in which expenditures on EGMs feed, or do not feed, into the local economy. If expenditures do feed through to further local economic activity there is a benefit for the local economy. If the expenditures accrue to agents who repatriate them outside the local economy there is no benefit for it. In such a circumstance the expenditure is said to be 'leaked'. The PARK model compares the situation that would arise with additional expenditures on EGMs with the status quo. In operationalising the comparison a number of crucial assumptions are required, the most important concerning 'leaked' expenditures. The analysis finds the results are very sensitive to these assumptions and the current structure of the model predisposes it to show large net losses from the introduction of additional EGMs. Alternative approaches to measuring the local economic impact of increasing the number of EGMs and the role of local economic impacts in the broader public policy debate are discussed in the paper.

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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222. Jones, R. A. (1993). *Win, lose, or draw: A study of the public benefits and the social costs of legalized gaming in British Columbia*: Simon Fraser University. MBA.

*The purpose of this paper is to review the rationale for government intervention in and to analyze the operation of, charitable gaming in the province of British Columbia.*

**Type:** Secondary Analysis

**Gambling Format:** Charitable Gaming

**Location(s):** Canada -- British Columbia

**Years Impacts Examined:** N/A

**Impacts:** N/A

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223. Kalischuk, R. G. (2010). Cocreating Life Pathways: Problem Gambling and its Impact on Families. *The Family Journal* 18(1): 7-17.

*The objective of this study was to present a grounded theory specific to problem gambling and its impact on families. The research question was "How does problem gambling impact the family?" Twenty-two families participated in the study; most families (n = 21) were involved in treatment for problem gambling. In total, 47 interviews were conducted with 37 family members. Using the grounded theory method, the interviews were analyzed and the resulting theory is comprised of seven interrelated, dynamic, and iterative elements. The first two elements, trauma and trigger, are specific to the problem gambler. These two elements are foundational to the initiation of problem gambling and are referred as the problem gambling platform. Once problem gambling behavior is initiated, both the gambler and other family members individually and collectively experience the other five elements including transition, tension and turmoil, transformation, transcendence, and termination. Understood from a holistic perspective, the psychosocial processes described in this theory ultimately result in family members cocreating life pathways for both themselves and other family members. Representing the*

*uniqueness of each individual family member's journey within the context of the family environment, this theory highlights the need for relational, family-focused care, and treatment options.*

**Type:** Original Research

**Gambling Format:** EGMs

**Location(s):** Canada - Alberta

**Years Impacts Examined:** 2008

**Impacts:** Social: Quality of Life / Public Health / Social Capital (This grounded theory is offered as a beginning explanation for enhancing understanding about the complex and iterative processes that family members undergo when confronted with problem gambling behavior. The theory illuminates the many life pathways that family members typically embark upon, for some leading to transcendence and for others leading to termination.)

224. Kang, S. K., Lee, C.-K., Yoon, Y. and Long, P. T. (2008). Resident perception of the impact of limited-stakes community-based casino gaming in mature gaming communities. *Tourism Management*, 29(4), 681-694.

*The purpose of this research is to assess the impacts of Colorado's community-based, limited-stakes casino gaming after 12 years of operation. Current residents' perceived impacts, benefits, and support of community development due to gaming were examined in the three Colorado gaming communities of Black Hawk, Central City, and Cripple Creek. Results of the study suggest that as gaming development has evolved, residents of these gaming towns have continued to reflect the underlying tenets of social exchange theory in their assessment of gaming. Perception by residents of positive gaming impacts significantly influenced residents' perceived benefits and these positive benefits also had a positive effect on residents' support for gaming. Findings of the study concluded that regardless of the life cycle stage of a gaming community, social exchange theory was still valid in explaining the relationships among residents' perceived impacts, benefits, and support of gaming development.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Colorado -- Black Hawk

United States -- Colorado -- Central City

United States -- Colorado -- Cripple Creek

**Years Impacts Examined:** 2003

**Impacts:** Social: Changed Attitudes (Results of this study suggest that as gaming development has progressed, residents of gaming towns in Colorado have continued to reflect the elements of social exchange theory in their behavior; Residents who perceive personal benefits from having gaming in their community are more likely to support gaming as an economic development tool; the positive economic impact from the gaming development in this study was found to be most significant in explaining residents' perceived benefits of the gaming development.)

225. Kang, Y. S., Long, P. T. and Perdue, R. R. (1996). Resident attitudes toward legal gambling. *Annals of Tourism Research*, 23(1), 71-85.

*This paper reports on the development of a scale to measure resident attitudes toward limited-stakes casino gambling as a tourism development strategy in their community. The scale development process started with definition of the construct, identification of 17 measurement items, and data collection in five towns in two US states. The data were subjected to outlier detection, exploratory Factor analysis, and unidimensionality tests via confirmatory factor analysis. These procedures yielded a five-item attitude scale with relatively high reliability and significant content and construct validity. The procedures and outcomes of this scale development effort are discussed with recommendations for future research on resident attitudes toward tourism and gambling.*

**Type:** Original Research; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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226. Kaplan, H. R. (1984). The social and economic impact of state lotteries. *The Annals of the American Academy of Political and Social Science*, 474(1), 91-106.

*Lotteries played an important role in the foundation of the United States but were abandoned because of abuses in the nineteenth century. Their reintroduction occurred in the second half of this century, when states turned to them as a way of generating needed revenue. This article explores the revenue-generating potential of state lotteries and concludes that they are incapable of contributing significant amounts of money to state coffers, and that they have not made inroads into illegal gambling. In the drive to increase revenues through legalized gambling, legislators may be ignoring their responsibility to address critical social issues directly through more progressive forms of revenue generation. To the extent that lotteries are utilized as a politically expedient alternative to taxation, they impede effective and constructive approaches to the amelioration of critical social problems.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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227. Kawerau Opotiki and Whakatane District Councils (2007). *Social impact assessment of gambling in the Eastern Bay of Plenty 2007*. Whakatane, New Zealand: Whakatane District Council.

*The purpose of this report is to assess the social impact of gambling on communities within the Eastern Bay of Plenty. This joint assessment has been prepared by the Kawerau, Opotiki and Whakatane District Councils.*

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** New Zealand -- Eastern Bay of Plenty Region

**Years Impacts Examined:** 2007?

**Impacts:** Economic: Increase Public Services distribution of profits from EGMs in local communities)

Social: Increase Problem Gambling and Related Indices (a number of areas impacted... all of them negative)

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228. Kearney, M. S. (2005). State lotteries and consumer behavior. *Journal of Public Economics*, 89(11-12), 2269-2299.

*This paper investigates two central issues regarding state lotteries. First, analyses of multiple sources of micro-level data demonstrate that household lottery spending is financed primarily by a reduction in non-gambling expenditures, not by a reduction in expenditures on other forms of gambling. The introduction of a state lottery is associated with an average decline of \$46 per month, or 2.4 percent, in household non-gambling expenditures.*



*Low-income households reduce non-gambling household expenditures by 2.5 percent on average, 3.1 percent when the state lottery includes instant games. These households experience statistically significant declines in expenditures on food and on rent, mortgage, and other bills. Second, consumer demand for lottery products responds positively to the expected value of the gamble, controlling for other statistical moments and product characteristics, including the nominal top prize amount. This finding is consistent with informed choice among consumers of lottery products, although other forms of irrational or misinformed choice cannot be ruled out.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries

**Location(s):** United States

**Years Impacts Examined:** 1982-1998

**Impacts:** Economic: Decreases in Business Revenue (the introduction of a state lottery is associated with a decline of \$137 per quarter in household expenditures on non-gambling items; the decline in non-gambling household expenditures is not a temporary phenomenon.)

229. Kearney, M. S. (2005). The economic winners and losers of legalized gambling. *National Tax Journal*, 58(2), 281-302.

*This paper reviews the government role in the legalized gambling sector and addresses some of the major issues relevant to any normative analysis of what the government role should be. In particular, the paper reviews evidence identifying the economic "winners" and "losers" associated with the three largest sectors of the industry: commercial casinos, state lotteries, and Native American casinos. The paper also includes a discussion of the growing Internet gambling industry. In addition to reviewing existing literature and evidence, the paper raises relevant questions and policy issues that have not yet been adequately addressed in the economics literature.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

230. Kelley, R. (2002). First nations gambling policy in Canada. *Journal of Aboriginal Economic Development*, 2(2), 41-55.

(policy overview and recommendations)

**Type:** Secondary Analysis

**Gambling Format:** Indian Gaming

**Location(s):** Canada

**Years Impacts Examined:** N/A

**Impacts:** N/A

231. Kelly, W. R. (2004). *The social impacts of legalized gambling*. Austin, TX: M. Crane & Associates.

*This evaluation is based on scientifically valid and reliable secondary research published in peer reviewed scientific journals and primary research conducted and published by or for government commissions. The research addresses five primary questions: • What are the social costs or impacts of legalized gambling on individuals and communities? • Does the availability of legalized gambling increase the number of problem or pathological gamblers? • What are the causes of problem and pathological gambling? • What is the current, best estimate of the prevalence of problem and pathological gambling? • Are some forms of gambling more problematic than others?*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

232. Kelly, J. M. and M. Clayton (2010). Money Laundering and Land-Based Casinos. *Gaming Law Review and Economics* 14(4): 275-284.

*Generally, it is remarkable at how little money laundering exists at regulated casinos, largely because of extensive surveillance, accounting, and internal controls designed to prevent such activity. There is a need to apply these regulations to countries that are starting casinos and to other areas of gambling, such as racetracks.*

**Type:** Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:**

**Impacts:** Social: Crime (appears to be very little money laundering in casinos, but may be more in racetracks and emerging casino jurisdictions).

233. Kim, W. (2006). *The economic impacts of American Indian casinos*. United States -- Maryland: University of Maryland, College Park. Ph.D. Dissertation.

*This dissertation analyzes the impact of American Indian casinos on social and economic outcomes of reservation residents using restrict-use data from 1990 and 2000 census long form. Federal legislature in 1988 allowed Indian tribes in certain states to open casinos and since then, over 400 casinos have opened, 240 of which have Las Vegas-style games. I demonstrate that casino operations increased employment rates and wages. The impact was primarily for Indians and larger for low-skilled workers among Indians. Employment rates of Indians increased by 6.0 percentage points for those with less than high school degree and by 5.5 percentage points for those with high school degree. Young Indian adults responded by dropping out of high school and not enrolling college even though many tribes had generous college tuition subsidy programs. High school enrolment rates fell by 4.8 percentage points for 18 year old Indian males, by 5.1 and 8.7 percentage points for Indian females aged 17 and 18. The high school graduation rate of those aged 20-24 fell by 9.6 percentage points and by 11.5 percentage points for Indian males and for Indian females, respectively. College entrance rate fell by 5.3 percentage points and by 8.8 percentage points for young Indian males and Indian females, respectively. Economic changes on gaming reservations also altered the incentives to marry and have children. Ever married rates of males increased by 2.6 to 5.0 percentage points for those aged 18 to 21. Ever married rates of females did not show any statistically significant changes except among 24 year old Indians. The fraction of females (aged 18 to 25) having children fell for both Indians and non-Indians by 3.4 to 3.7 percentage points.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States

**Years Impacts Examined:** 1990-2000

**Impacts:** Economic: Increased Personal income

Social: Increased Employment (Among reservation residents aged 18 to 64, labor force participation increased for Indians by 1.68 percentage points, unemployment fell by 3.06 percentage points, and real income of the employed increased by \$2,004 for Indians; improvements in labor market opportunities were for low skilled Indian worker and as a result, the returns to having a college degree fell relative having fewer years of education.)

234. Kindt, J. W. (1994). The economic impacts of legalized gambling activities. *Drake Law Review*, 43, 51-95.

*This article extrapolates downward from national and interstate economic factors to the state economies and demonstrates how the strategic elements of gambling activities impact state and local economies. Gambling organizations traditionally focus their attention on local economies or specialized factors in those local economies or both. This narrow focus usually gives a distorted view of selected positives that the gambling activities allegedly bring to the local community.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

235. Kindt, J. W. (1995). U.S. national security and the strategic economic base: The business/ economic impacts of the legalization of gambling activities. *Saint Louis University Law Journal*, 39, 567-584.

*With the legalization of various types of gambling activities sweeping the United States and much of the international community, the issue is whether this trend constitutes an economic boom, a harmless recreational pastime, or an actual threat to the strategic economic base of the industrialized world, and in particular, of the United States. Business-economic history indicates that the legalization of gambling activities precipitates a classic "boom and bust" economic cycle. Accordingly, this article concludes that because widespread legalized gambling activities represent such a threat to the strategic U.S. economic base and to stability of expectations, Congress should seriously consider federal legislation to re-criminalize or severely limit practically all types of legalized gambling activity. As an interim measure, Congress should consider withholding federal funds from those states intent on experimenting with legalized gambling activities, for individual states should not be allowed to engage in a type of economic secession which threatens the nation's entire economic base.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

236. Kindt, J. W. (2001). The costs of addicted gamblers: Should the states initiate mega-lawsuits similar to the tobacco cases? *Managerial and Decision Economics*, 22(1-3), 17-63.

*This analysis will compare the gambling industry to the tobacco industry. It predicts that in the future the gambling industry will be held financially liable by the states for the social and economic impact gambling has on US society. Furthermore, this analysis concludes that the gambling industry will be vulnerable to state initiated mega-lawsuits—even without specific costs being delimited either for individual 'pathological gamblers' or for individual 'problem gamblers'. Thus, definitional debates and academic debates regarding socio-economic costs may be largely irrelevant with regard to the states' mega-lawsuits because the gambling industry's lobbyists at the American Gaming Association (AGA) acting on behalf of the gambling industry, and individual gambling companies have acknowledged that the industry has created new pathological and problem gamblers during the 1990s.*

**Type:** Original Research; Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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237. Kindt, J. W. (2003). Diminishing or negating the multiplier effect: The transfer of consumer dollars to legalized gambling: Should a negative socioeconomic "crime multiplier" be included in gambling cost/benefit analyses? *Michigan State DCL Law Review*, 2003(2), 281-313.

*This analysis reviews whether the logical extension of the socio-economic costs caused by pathological gambling should include a negative socio-economic (i.e., "crime") multiplier in gambling cost/benefit analyses. Traditional economic theory posits that normal consumer spending benefits the economy by more than just the amount spent, as that money is reinvested in the economy. Arguably however, consumer dollars diverted into gambling dollars have a diminished economic multiplier effect. The contention is that added to this diminished economic multiplier, there should be a socio-economic "crime" multiplier--due to the unique socioeconomic costs inherent in state-sanctioned gambling activities. During the 1990s, socio-economic experts directed academic attention to the new addicted gamblers, new bankruptcies, and new crime that occurred in the United States during the 1980s and 1990s when state governments decriminalized organized gambling activities. The starting point for such cost analyses can be found in the tables and accompanying footnotes in the article *The Costs of Addicted Gamblers: Should the States Initiate Mega-Lawsuits Similar to the Tobacco Cases? (Mega-Lawsuits)*. These costs will be summarized at the end of this analysis, but first there are two preliminary questions that should be reviewed: 1. When consumer dollars are transferred into decriminalized gambling activities is the normal economic multiplier effect diminished? 2. When consumer dollars are transferred into decriminalized gambling activities could the economic multiplier effect be not only diminished, but also an overall "negative" economic multiplier?*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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238. Kindt, J. W. (n.d.). *The business-economic impacts of licensed casino gambling in West Virginia: Short-term gain but long-term pain.*

*There is an imperative need for a new national commission to review gambling activities throughout the United States because few states have prepared comprehensive cost/benefit analyses of the social and economic impacts of encouraging more licensed gambling activities-particularly casino-style gambling. West Virginia, in particular, has not prepared such a report.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

239. Koo, J., Horn, A., Rosentraub, M. S. and Rugle, L. (2005). *The social costs of casino gambling for Ohio: A review of what is known and estimates of future expenses. Prepared for The Greater Cleveland Partnership and Selected Cincinnati Area Businesses.* Cleveland, Ohio: Maxine Goodman Levin College of Urban Affairs.

*This study seeks to provide answers to three important questions to help Ohio's leaders and voters understand the social effects of opening casinos in the state. First, would the proximity of casinos induce higher levels of gambling problems in Ohio's adult population? Second, do people with gambling addictions have more social, legal, physical, or financial problems than the general public? Third, what is the cost to the State of Ohio to address the needs of people who are either problem or pathological gamblers? Related to the issue of treatment expenditures is the cost of any dysfunctional behavior that results from compulsive gambling, and this too is considered.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

240. Koo, J. U. N., Rosentraub, M. S. and Horn, A. (2007). Rolling the dice? Casinos, tax revenues, and the social costs of gaming. *Journal of Urban Affairs*, 29(4), 367-381.

*Advocates for casino gambling in urban centers point to the benefits from increased taxes and job opportunities. While there is evidence to sustain those claims, those who oppose legalized gambling point to the personal and social costs that result from increased numbers of addicted gamblers and believe those negative outcomes exceed the fiscal gains. Each time voters and public officials are asked to vote for or against expanded gambling centers to produce more tax revenue, advocates for the opposing positions point to different studies— some illustrating increased social and personal costs, while others extol the fiscal returns to urban areas. Using trend line and regression analyses of outcomes in three states with casinos—Michigan, Indiana, and West Virginia—as well as Ohio that borders these states, this study attempts to provide a new perspective. The work reported here finds no significant negative changes in unemployment, bankruptcy, or crime rates after casinos opened. Further, while in some regression models small increments in personal bankruptcy filings were noted, the most stringent model found no significant increases in personal bankruptcies related to a casino's presence. While one study of three social problems will not close the gap between casino advocates and opponents, these results provide voters and public officials with important information from which to weigh the fiscal gains from casinos to determine if the benefits are attractive enough to warrant what is found to be a small risk of very modest (or no) increments in some selected social problems.*

**GOOD QUALITY****Type:** Original Research; Secondary Analysis**Gambling Format:** Casinos**Location(s):** United States -- Michigan

United States -- Indiana

United States -- West Virginia

United States -- Ohio

**Years Impacts Examined:** 1991-2003

**Impacts:** Social: No Impact on Employment; No Impact on Problem Gambling and Related Indices (regression model indicates that there might be some casino effects on bankruptcy, but the most stringent model finds no effects); No Impact on Crime. The social cost variables are more likely to be affected by macro level changes such as business cycles and changes in legal environment.)

241. Korn, D., A. (2000). Expansion of gambling in Canada: Implications for health and social policy. *Canadian Medical Association Journal*, 163(1), 61-64.

*Canada experienced a dramatic increase in legalized gambling in the 1990s, primarily because of governments' need to increase revenue without additional taxation. This article examines gambling from a public health perspective. The major public health issues include gambling addiction, family dysfunction and gambling by youth. Debates have emerged about the health, social and economic costs and benefits of gambling. Stakeholder and social policy groups have expressed concern about the impact of expanded gambling on the quality of life of individuals, families and communities. Epidemiological studies show that the prevalence of gambling in the general adult population is low but increasing. Of particular concern is the high though steady prevalence of gambling among youth. New technologies have been linked to gambling-related problems such as addiction to gambling by video lottery terminals. Gambling by means of the Internet represents another emerging issue. The article concludes with recommendations for health and social policy related to gambling. These recommendations incorporate a broad public health approach to create a strong research program and to balance risks and benefits.*

**Type:** Methodological Issues**Gambling Format:** N/A**Location(s):** N/A**Years Impacts Examined:** N/A**Impacts:** N/A

242. Korn, D., Gibbins, R. and Azmier, J. (2003). Framing public policy towards a public health paradigm for gambling. *Journal of Gambling Studies*, 19(2), 235-256.

*This paper examines the public policy value of looking at gambling from a public health perspective. The manner in which social issues are framed will either expand or curtail public policy debates. The existing and traditional frames for gambling (e.g. gambling as a matter of individual freedom, gambling as a form of recreation) fail to consider research on the social and economic impacts of gambling. Because a public health frame offers a broad viewpoint of society, it encompasses a number of social and economic impacts not considered in traditional frames. However, the existing gambling frames enjoy varying degrees of cultural, economic, and political support and, as a result, creating a higher profile for a public health framework will encounter a number of barriers. Research can play a decisive role in overcoming these barriers, as it has in a number of related fields (e.g., tobacco use, addiction and product liability, the epidemiology of AIDS). The paper concludes that research that identifies and quantifies*

*the public health factors of gambling will substantially contribute to a public shift toward a public health frame.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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243. Korn, D. A. and Shaffer, H. J. (1999). Gambling and the health of the public: Adopting a public health perspective. *Journal of Gambling Studies*, 15(4), 289-365.

*During the last decade there has been an unprecedented expansion of legalized gambling throughout North America. Three primary forces appear to be motivating this growth: (1) the desire of governments to identify new sources of revenue without invoking new or higher taxes; (2) tourism entrepreneurs developing new destinations for entertainment and leisure; and (3) the rise of new technologies and forms of gambling (e.g., video lottery terminals, powerball mega-lotteries, and computer offshore gambling). Associated with this phenomenon, there has been an increase in the prevalence of problem and pathological gambling among the general adult population, as well as a sustained high level of gambling-related problems among youth. To date there has been little dialogue within the public health sector in particular, or among health care practitioners in general, about the potential health impact of gambling or gambling-related problems. This article encourages the adoption of a public health perspective towards gambling. More specifically, this discussion has four primary objectives: 1. Create awareness among health professionals about gambling, its rapid expansion and its relationship with the health care system; 2. Place gambling within a public health framework by examining it from several perspectives, including population health, human ecology and addictive behaviors; 3. Outline the major public health issues about how gambling can affect individuals, families and communities; 4. Propose an agenda for strengthening policy, prevention and treatment practices through greater public health involvement, using the framework of The Ottawa Charter for Health Promotion as a guide. By understanding gambling and its potential impacts on the public's health, policy makers and health practitioners can minimize gambling's negative impacts and appreciate its potential benefits.*

**Type:** Original Research; Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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244. KPMG Forensic Australia and KPMG Forensic New Zealand (2009). *Fraud Survey 2008*: KPMG.

*KPMG's eighth biennial Fraud Survey shows a significant increase in fraud in Australia and New Zealand, compared with our last survey in 2006. Gambling was the major driver of fraud and a significant number of the reported incidents of fraud involved some form of identity compromise. The findings in this report come from the responses to a questionnaire sent in August 2008 to a representative sample of Australia and New Zealand's largest organisations across the public and private sectors. The questionnaire sought information about fraud incidents within the respondents' business operations during the period February 2006 to January 2008. Usable responses were received from 420 organisations, representing just over 20 percent of the 2,018 surveys distributed.*

**Type:** Original Research

**Gambling Format:** All Gambling

**Location(s):** Australia; New Zealand

**Years Impacts Examined:** 2008

**Impacts:** Social: Increased Crime (The most common motive for fraud, measured by the value of the fraud committed, was gambling. Forty-four percent of the total value of fraud was attributed to this reason without any apparent more specific motive.)

245. KPMG Management Consulting (1995). *One-year review of Casino Windsor*. Toronto: KPMG.

*The scope of this review is to assess the impacts of the first year of operation of Casino Windsor on Windsor, Essex County, and Ontario. The review includes detailed assessment of economic, community, and policing impacts. After the introduction, this review document describes operations impacts (value-added, employment, and government revenues generated from operating expenditures made by the casino and its suppliers); impacts due to incremental tourist spending, i.e. spending outside the casino by tourists whose primary purpose was to visit the casino; impacts on neighborhoods, social assistance, problem gambling, and other legal gaming activities such as bingo and lotteries; and policing impacts in the context of public safety and security both inside and outside the casino. Appendices include descriptions of estimation procedures and a glossary.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** Canada -- Ontario -- Windsor

Canada -- Ontario -- Windsor-Essex County

**Years Impacts Examined:** 1994-1995

**Impacts:** Economic: Increased Government Revenue; Increased Public Services (increased revenue for federal, provincial, municipal governments); Increased Infrastructure Costs (Casino Windsor funded 25 additional police officers ; some concern about parking cost increases, increased noise/traffic); Increased Business Revenue (some retailers report increased sales, room revenues increased 50%; however downtown retailers report little change with the exception of parking lots which saw an increase)

Social: Increased Employment (7,200 person-years of employment increase; decrease in unemployment rate; decrease in welfare caseloads); No Impact on Crime (no change in violent or non-violent crime citywide)

246. KPMG Management Consulting (2002). *Casino market assessment: Moncton, New Brunswick. Prepared for the City of Moncton*. Toronto: KPMG [Canada].

*The City of Moncton is in the process of revitalizing its downtown core. One of many initiatives being contemplated is the redevelopment of the "Beaver Lumber" site into a multi-use commercial development. Components being considered include a hotel, a conference/convention facility, an entertainment facility, residential units, a municipal aquatic centre and a casino.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A



247. Kubursi, A. and Jaffray, D. (1999). *The social and economic impacts of a permanent casino in Hamilton*. Hamilton, ON: Social Planning and Research Council of Hamilton-Westworth.

*This study examined the potential of a permanent casino in Hamilton with respect to its financial viability, economic impacts and social impacts. Although these three aspects are interrelated and influence one another, the results are presented separately for each aspect.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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248. Kwan, F. V. C. and McCartney, G. (2005). Mapping resident perceptions of gaming impact. *Journal of Travel Research*, 44(2), 177-187.

*Macao residents' perceptions of the impact of gaming development at a significant time in Macao's long experience with gaming just after the end in 2002 of the 70-year-old monopoly system for the gaming sector and the introduction of new casino operators into the market. The findings led to the conceptualization of a gaming impact perception matrix, creating a perception typology based on cost-benefit perceptions of gaming development in different time periods.*

**Type:** Original Research

**Gambling Format:** Casinos; Horse Racing; Dog Racing

**Location(s):** Macao

**Years Impacts Examined:** 2002

**Impacts:** Social: Attitudes (In the current stage of gaming development in Macao, residents characterized by various demographic characteristics have varying perceptions of gaming impact at the personal, social, and environmental levels)

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249. Ladouceur, R., Boisvert, J. M., Pépin, M., Loranger, M. and Sylvain, C. (1994). Social cost of pathological gambling. *Journal of Gambling Studies*, 10(4), 399-409.

*Pathological gambling creates enormous problems for the afflicted individuals, their families, employers, and society, and has numerous disastrous financial consequences. The present study evaluates the financial burdens of pathological gambling by questioning pathological gamblers in treatment in Gamblers Anonymous (n=60; 56 males, 4 females; mean age = 40 years old) about personal debts, loss of productivity at work, illegal activities, medical costs and the presence of other dependencies. Results show that important debts, loss of productivity at work and legal problems are associated with pathological gambling. Discussion is formulated in terms of the social cost of adopting a liberal attitude toward the legalization of various gambling activities.*

**Type:** Original Research

**Gambling Format:** All gambling

**Location(s):** Canada -- Quebec

**Years Impacts Examined:** 1990?

**Impacts:** Social: Crime (In this study, 68 % of respondents report having engaged in illegal acts to finance their

gambling); Problem Gambling and Related Indices (Results show that important debts, loss of productivity at work and legal problems are associated with pathological gambling; Our study confirms that pathological gambling has serious negative consequences for the individual's health.)

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250. Lahr, M. L. H., Garrett, Chao, Jessica, Azhar, Naheed (2010). *The Contribution of the Casino Hotel Industry to New Jersey's Economy*. Submitted to: The Casino Association of New Jersey. New Brunswick, NJ, Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers, The State University of New Jersey.

*This report examines the contribution of New Jersey's casino resort industry to the New Jersey economy. Table S1 summarizes the overall contribution of the industry (its direct effects plus their economic multipliers) by subsector. The table shows the spending by patrons at the casino resorts themselves and at other casino industry supported non-casino businesses in Atlantic City and the number of jobs and payroll generated as a result of that patron spending. The table also summarizes the impacts on New Jersey employment from the purchases made and local and state taxes and fees paid by the casino resort industry and non-casino, Atlantic City tourism businesses. While the subsector information is provided in more detail below, the summary table shows the significant total economic impact of the New Jersey casino resort industry as it annually supports approximately 101,500 jobs in the state that yield \$4.2 billion in payroll income and \$6.5 billion annually in GDP.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States – New Jersey

**Years Impacts Examined:** 2008

**Impacts:** Economic: Government Revenue (In 2008, the casino resort industry is also directly responsible for approximately \$664.3 million in state tax revenues/fees and \$238.9 million in local tax revenues); Public Services (indirectly supported by tax revenues); Increased Business Revenue (the presence of hotel casinos in Atlantic City induces about \$7.5 billion in spending there. Of this, about 60 percent or \$4.5 billion is spent on gaming. The remaining \$3.0 billion is spent on various shopping and tourism services.)

Social: Employment (total economic impact of the New Jersey casino resort industry as it annually supports approximately 101,500 jobs in the state that yield \$4.2 billion in payroll income and \$6.5 billion annually in GDP.)

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251. Landry, R. J., Lowe, S. K. and Boozer, B. B., Jr. (2009). Examining state sponsored lotteries and their effect on bankruptcy filing rates: A time series analysis. *Journal of Legal, Ethical and Regulatory Issues*, 12(2), 69-83.

*A significant body of research of state-level policies that cause the interstate variation of consumer bankruptcy filing rates is developing. Beyond the commonly tested economic and demographic explanatory variables, the possible impact of other policy choices on consumer bankruptcy filing rates should be examined. One such policy is the implementation of a lottery. To date there is very limited research, empirical or otherwise, examining the relationship between a lottery and a state's consumer bankruptcy filing rate. Prior research examining this relationship has yielded mixed results. This study is the first to utilize a time-series regression design to analyze the impact of enacting the lottery on a state's consumer bankruptcy filing rate. The primary research question in this study is as follows: What impact, if any, does the presence of a lottery have on a state's consumer bankruptcy filing rate? Prior findings of no statistically significant relationship between a lottery and a state's consumer Chapter 7 filing rate were confirmed. However, mixed results were found regarding the relationship between a lottery and a state's Chapter 13 filing rate, as well as a lottery and the total percentage of Chapter 7 consumer filings. Future research and potential policy implications are suggested.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lottery

**Location(s):** United States -- Georgia

United States -- Indiana

**Years Impacts Examined:** From 1989 (Indiana); From 1993 (Georgia)

**Impacts:** Economic: No or little Impact on Costs Related to Problem Gambling (It appears the presence of a lottery does not have an impact on a state's per-capita Chapter 7 consumer-bankruptcy filing rate.)

Social: No Impact on Problem Gambling; Increase in Problem Gambling (for Georgia, the presence of a lottery did increase the state's percentage of total consumer bankruptcy filing that are under Chapter 7; for Indiana, the opposite results were found).

252. LaPlante, D. A., Schumann, A., LaBrie, R. A. and Shaffer, H. J. (2008). Population trends in Internet sports gambling. *Computers in Human Behavior*, 24(5), 2399-2414.

*The Internet is a controversial new medium for gambling. This study presents the first longitudinal analysis of online gambling participation and activity among a population of newly subscribed Internet bettors. Our analyses indicate that this population of gamblers adapted to the new subscription service rapidly, as evidenced by quickly developing declines in population participation, number of bets, and size of stakes. Adaptation was not uniformly evident in our population. Among subgroups of heavily involved bettors, adaptation was generally slower or not apparent. Rather than adapt, involved bettors often maintained the high level of betting they escalated to in the days following subscription. This was particularly evident for one type of game: live-action betting. These involved individuals and the effect of live-action play require close scrutiny and ongoing examination.*

**Type:** Original Research

**Gambling Format:** Internet Gambling (Sports Wagering)

**Location(s):** Worldwide

**Years Impacts Examined:** 2005-2006

**Impacts:** Social: No Impact on Problem Gambling (At the population-level, this research challenges common assumptions that Internet gambling will stimulate excessive patterns of gambling. This study revealed that new Internet gambling subscribers tended to adapt fairly quickly to betting using the service. However, for individuals who are very involved in Internet gambling (i.e., MIBs), there might still be cause for concern.)

253. LaPlante, D. A. and Shaffer, H. J. (2007). Understanding the influence of gambling opportunities: Expanding exposure models to include adaptation. *American Journal of Orthopsychiatry*, 77(4), 616-623.

*Many regions are considering expanding the various forms of gambling that are available to residents. The expansion of legalized gambling frequently is the topic of heated debate because of possible harmful ramifications on individuals' mental and physical health as well as the public's health in general. Conventional wisdom holds that the expansion of gambling relates to increases in gambling-related problems among the population (i.e., the exposure effect). A review of empirical evidence provides an opportunity to verify the accuracy of this wisdom. An evaluation of available research studies provides some support for the exposure effect, but also raises questions about the durability of that phenomenon across settings and time points. Some exposure studies indicate specific patterns of gambling activity and consequences that are inconsistent with the exposure effect. These studies suggest that some people and some places might have adapted to the risks and hazards of gambling (i.e., the adaptation effect). This evaluation suggests that social context is an important moderator of exposure processes.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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254. Layton, A. and Worthington, A. (1999). The impact of socio-economic factors on gambling expenditure. *International Journal of Social Economics*, 26(1), 430-440.

*A study was conducted to analyze the socio-economic determinants of gambling expenditure on lotteries, poker machines, course betting and casino-type games in Australia. The variables considered were age, sex, ethnicity, occupational status and family composition. Results indicated that the variables significantly influenced the probability of households gambling and varied across a large range of gambling products.*

**Type:** Original Study; Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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255. Lee, C. K. and Back, K. J. (2003). Pre- and post-casino impact of residents' perception. *Annals of Tourism Research*, 30(4), 868-885.

*While most of the previous research on residents' perceptions was conducted in the form of snapshots taken at a particular time, or after tourism development, this paper aims to explore any significant differences in these perceptions between pre- and post-development of casinos. The survey for this study was developed to examine the underlying relationships among impact, benefit, and support variables based on social exchange theory, using a structural equation model. The results show that positive economic impact was most significant in determining the benefit level, which was further enhanced after the casino opened. Respondents perceived positive social impacts to be most significant both before and after casino development.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Korea -- Kangwon Province

**Years Impacts Examined:** 2000

**Impacts:** Social: Changed Attitudes (Confirmatory factor analysis showed six underlying dimensions measuring residents' perceived impacts of casino development. Results of paired t-tests showed that most of these impact factors scored lower in post-data.)

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256. Lee, C.-K., S. Kang, et al. (2010). Community Attachment in Two Rural Gaming Communities: Comparisons between Colorado Gaming Communities, USA and Gangwon Gaming Communities, South Korea. *Tourism Geographies: An International Journal of Tourism Space, Place and Environment* 12(1): 140 - 168.

*This study compared residents' community attachment in two rural gaming communities in Colorado, USA and Gangwon Province, South Korea by examining whether residents' socio-demographic variables were related to their*

*community attachment and whether residents' community attachment affected their perceived impacts, benefits and support for casino gaming development. Both casino impact areas have shared similar underlying legalization characteristics; both communities were depressed mining areas whose economy had declined significantly. The findings revealed that residents' community attachments were significantly different between the two data collection sites. Consequently, the differences in community attachment influenced residents' perceptions of, benefits, and support for gaming development in both sites. The findings partly reinforced earlier findings regarding the relationships between community attachment and attitudes to tourism, supporting the notion that highly community-attached individuals view the benefits of tourism more positively and show a stronger support for tourism in their communities than less attached individuals.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** South Korea – Gangwon Province; United States - Colorado

**Years Impacts Examined:** 2004 (US); 2007 (S.Korea)

**Impacts:** Social: Public Attitudes (In both Colorado and Gangwon Province, those residents who had strong community attachment were more likely to perceive the positive social impact of casino development and were less likely to perceive its negative social impact. In addition, perceived benefits and support were influenced by the community attachment level. The higher the community attachment level, the stronger the perceived benefits and support for gaming development among residents.)

257. Lee, C. K., Kim, S. S. and Kang, S. (2003). Perceptions of casino impacts-a Korean longitudinal study. *Tourism Management*, 24(1), 45-55.

*The purpose of this paper is to explore residents' perceptions toward casino development. Specifically, this paper examines whether there are significant differences between residents' perceptions before and after the casino development and whether impact factors are correlated with both support for casino and expected personal benefits. Paired t-tests show that residents' perceptions were significantly different before and after the casino development. Specifically, residents were likely to perceive positive impacts less strongly and negative impacts as being less worse after the casino opened than they did prior to the casino's opening. In contrast, residents were likely to perceive direct gambling costs as being more serious after the casino opened than they did prior to the casino's opening. Correlation analysis indicates that those residents who supported the casino development were likely to perceive economic and social impacts more positively. Residents who perceived they would personally benefit from the casino development were also likely to express economic and social impacts more positively, indicating support for a social exchange theory.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Korea

**Years Impacts Examined:** 2000

**Impacts:** Social: Changed Attitudes (The results indicate that residents who perceived they would personally benefit from the casino development were likely to express economic and social impacts more positively.)

258. Lee, C.-K., Kang, S. K., Long, P. and Reisinger, Y. (2010). Residents' perceptions of casino impacts: A comparative study. *Tourism Management*, 31(2), 189-201.

*The primary purpose of this study was to explore differences in residents' perceptions of casino development between South Korea and Colorado. The communities surveyed are former depressed mining areas with significant*

historic characteristics. The secondary purpose was to investigate whether social exchange theory is appropriate to explain residents' perceptions of the impact of casinos on community support for casino development. In general, three factors of residents' perceptions and support were found to be significantly different between the two study sites. Furthermore, the effects of positive social impact on benefits, of both positive social impact and negative environmental impact on support, and the benefit factor on support level were significantly different between the two data collection areas. The study findings support the appropriateness of social exchange theory in explaining residents' responses in both study areas.

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Korea -- Gangwon Province  
United States -- Colorado

**Years Impacts Examined:** 2007 (Korea)

**Impacts:** Social: Increased Positive Attitudes (Positive Social Impact was also strongly perceived by residents, which in turn, influenced both benefit perception and support level. This positive perception may be derived from the positive economic impacts that have made gaming communities more attractive and better places to live by improving infrastructures and overall economic conditions.)

259. Lee, K. N. K. (2006). *Casinos: Social impact and regeneration: An international case review commissioned by the Casino Advisory Panel*. London: Department for Culture, Media and Sport.

*This research aims to use international research and case studies to explore the following issues to examine the possible impacts casino developments could have in the UK.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

260. Lee, Y.-K. (2005). The social impacts of the Public Welfare Lottery: An empirical study in Taiwan. *Modern Asian Studies*, 39(1), 133-153.

*In Taiwan, the legalised gambling sponsored by the government—the Public Welfare Lottery—was re-introduced on January 2002. Since then, the unprecedented lottery fever has become a social phenomenon that deserves our attention. This research focuses on the ‘public welfare’ effects as the name of the lottery was billed. The study consists of qualitative and quantitative analyses, which has served effectively to assess the advocacy of the ‘social ill’ for the ‘social good’.*

**Type:** Original Research

**Gambling Format:** Lotteries

**Location(s):** Taiwan

**Years Impacts Examined:** 2002

**Impacts:** N/A

261. Lester, D. (1994). Access to gambling opportunities and compulsive gambling. *International Journal of the Addictions*, 29(12), 1611-1616.

*Compared the numbers of chapters of Gamblers Anonymous (GA) with the availability of gambling in all 50 states. Results show that the opportunity to gamble at casinos with slot machines, on sports betting, at jai alai, and in teletheaters was associated with a greater per capita incidence of GA chapters. Forms of gambling not associated with the density of GA chapters included bingo and charitable gambling, most forms of simple state lotteries, and greyhound and horse racing.*

**Type:** Original Research

**Gambling Format:** All Gambling

**Location(s):** United States

**Years Impacts Examined:** 1990-1991

**Impacts:** Social: Increased Problem Gambling and Related Impacts (the greater the opportunity for certain types of gambling in a region, the greater the number of compulsive gamblers)

262. Li, G., Gu, X., & Siu, R. (2010). The Impacts of Gaming Expansion on Economic Growth: A Theoretical Reconsideration. *Journal of Gambling Studies* 26(2): 269-285.

*This paper employs a general equilibrium framework to analyze the effects on economic growth of global expansions in casino gaming, which exports gambling services largely to non-residents. Both domestic and foreign investments in the gaming sector bring in not only substantial revenues but also positive spillover effects on related sectors and even on the entire local economy. However, an over-expansion of commercial gambling may lead to deterioration in the terms of trade with an adverse impact on real income. If this situation persists, it would not be impossible for immiserizing growth to occur. As a highly profitable sector, casino gaming may enable its operators to diversify out of this risk if they invest retained profits in non-gaming sectors to cash in on the spillover effects it has created. The gaming-dominant economy can then be directed on a more balanced and sustainable growth path, and will become less susceptible to business cycles. Indeed, economic experiences in the world's major casino resorts are consistent basically with this argument for diversification. We believe that after the current global crisis fades away, economic growth and resulting surges in global demand for gambling services can provide further opportunities for the expansion of existing casino resorts and the development of new gaming markets.*

**Type:** Methodological Issues

**Gambling Format:** Casinos

**Location(s):** Worldwide

**Years Impacts Examined:** N/A

**Impacts:** N/A

263. Ligthelm, A. A. (2001). Community attitudes towards casinos and the estimated magnitude of problem gambling: The Mpumalanga case. *African Sociological Review*, 5(2), 122-132.

*This report presents results of a community survey aimed at monitoring community perceptions of & trends in gambling behavior. The results of the survey also provide an indication of the possible magnitude of "at risk" (problem) gambling in Mpumalanga. This information could be of great value in policy development & decision making with respect to the government's endeavor to design appropriate measures relating to the casino industry. 4 Tables, 4 Figures, 7 References. Adapted from the source document.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** South Africa -- Mpumalanga

**Years Impacts Examined:** 2000

**Impacts:** N/A (majority of casino patrons regard gambling as an important leisure activity; but community holds diverging views on casino-related issues)

264. Ligthelm, A. A. (2004). *Gambling behaviour in Gauteng: Study commissioned by the Gauteng Gambling Board and Gauteng Department of Finance and Economic Affairs*: Bureau of Market Research, University of South Africa.

*The objective of the study is to measure the socioeconomic impact of gambling in Gauteng in terms of the following: Community attitudes towards gambling, including aspects such as participation in gambling activities, reasons for abstaining and gambling as a leisure activity; access to gambling facilities and expenditure on gambling; Propensity to gamble and expenditure displacement; Problem gambling; Size and contribution of the gambling sector.*

**Type:** Original Research

**Gambling Format:** Casinos; Bingo; Horse Racing; Sports Wagering

**Location(s):** South Africa -- Gauteng

**Years Impacts Examined:** 2003

**Impacts:** Economic: Changes in Business Revenue (a variety of significant changes have emerged in household expenditure patterns, implying that gambling cannot be typified as the single most important reason for changes in household expenditure; forfeiture of other household expenditure items in favour of gambling may range from small pro-rata cuts on various items to the substitution of one or two items with gambling. Household budget behaviour often consists of small cuts on discretionary items rather than one large substitution.)

265. Lin, E.-Y. J., Casswell, S., Easton, B., Huckle, T., Asiasiga, L., & You, R.Q. (2010). Time and money spent gambling and the relationship with quality-of-life measures: A national study of New Zealanders. *Journal of Gambling Issues* (24): 33-53.

*This study provides quantitative measures of the impacts of gambling from a general population sample exposed to a range of gambling opportunities. New tools to assess the level of gambling participation and quality-of-life measures were used in a telephone survey with 7,010 adults in New Zealand. The findings show that people with higher gambling loss reported significantly poorer physical health, mental health, relationships, feelings about self, quality of life, satisfaction with life, living standards, and study performance. When respondents' reports of quality of life in the various domains were analysed in relation to the time spent gambling in different modes, it was clear that time spent on electronic gaming machines provided the greatest risk for people's quality of life. This study estimated that 2.4% of the population had an inferior state of reported mental well-being as a result of gambling. The main contribution came from the playing of electronic gaming machines.*

## **GOOD QUALITY**

**Type:** Original Research

**Gambling Format:** All gambling; focus on EGMs

**Location(s):** New Zealand

**Years Impacts Examined:** 2007

**Impacts:** Social: Negative Impact on Quality of Life (In summary, the evidence from the current study that time



spent gambling disaggregated into different modes of gambling is very informative. Although playing EGMs in bars was the greatest risk for people's quality of life, some forms of gambling proved to have beneficial impacts on the gamblers.)

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266. Little, M. (2002). Casino as a cash cow: A cautionary tale? *Journal of Aboriginal Economic Development*, 2(2), 68-76.

*It is possible to take marginalized communities and empower them through the gaming mechanism but well thought out safeguards must be built into the plan. The quandary posed by the use of gambling to woo prosperity is not easily resolved. It is vital that First Nations create institutions worthy of community support and respect. Precise financial management controls coupled with a concern for healthy families can be a winning formula for economic and spiritual salvation.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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267. Littlepage, L., Payton, S. and Atibil, C. (2004). *Riverboat gambling in Indiana: An analysis of the impacts*. Indianapolis, IN: Center for Urban Policy and the Environment.

*This paper sets Indiana in context as compared to other states in terms of gaming revenue, employment, and taxes to determine the relative scope of casino gaming in Indiana. The tourism, employment, fiscal, and economic impacts of the nine Indiana riverboats that have been analyzed are then compared.*

**Type:** Original Research

**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States -- Indiana

**Years Impacts Examined:** 5 yrs

**Impacts:** Economic: Increased Government Revenue (substantial tax generators for state and local governments; in some communities gaming tax = \$5,000 per person per year); Increased Public Services (based on small portion of casino revenues)

Social: Increased Employment (employment averages 1,600 employees / casino community but the impact varies, ranging from one per cent of the total labor force to 70 per cent; 40 per cent of workers had been working part-time or not at all when hired)

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268. Long, P., Clark, J. and Liston, D. (1994). *Win, lose or draw? Gambling with America's small towns*. Queenstown, MD: Aspen Institute.

*This book uncovers some of the key policy issues of small town gambling in the 1990s. The book is based on the authors' comprehensive study of gambling in small communities of Colorado and South Dakota. The authors also discuss many issues and pose questions that small communities should be asking themselves in regard to gambling. The book appeals to local policymakers to examine the issues, to identify courses of action, and to create guidelines for lawmakers and community leaders.*

**Type:** Original Research (summary of results published in other articles by author)

**Gambling Format:** Casinos

**Location(s):** United States -- Colorado -- Black Hawk

United States -- Colorado -- Central City

United States -- Colorado -- Cripple Creek

United States -- South Dakota -- Deadwood

**Years Impacts Examined:** 1992-1993

**Impacts:** Economic: Increased Government Revenue

Social: Changed Attitudes

269. Long, P. T. (1996). Early impacts of limited stakes casino gambling on rural community life. *Tourism Management*, 17(5), 341-353.

*Owing to the potential windfall profits of casino gambling, rural communities throughout the United States are considering gambling tourism as a means to revitalize failing economies, The communities of Deadwood, South Dakota, and Black Hawk, Central City and Cripple Creek, Colorado, have implemented one form of casino gambling, limited stakes, with varying degrees of success, It is clear from the early experience of these communities that gambling can spawn terrific windfalls - and generate tremendous costs, Thus, public officials, casino owners and managers, community leaders and residents must all understand the issues communities face in making the transition to a gambling economy and plan accordingly, An unbridled move to a gambling economy causes tremendous change and the need for dramatic adjustment in the lives of community residents. Early indications are that planning is essential at the community, state and gambling industry level, Determining appropriate scale, assessing current and future competition, and identifying who should benefit must be an integral part of this planning effort.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- South Dakota -- Deadwood

United States -- Colorado -- Cripple Creek

United States -- Colorado -- Black Hawk

United States -- Colorado -- Central City

United States -- Colorado -- Grand Lake

**Years Impacts Examined:** 1992

**Impacts:** Social: Changed Attitudes (Generally, respondents from Deadwood expressed greater satisfaction with the status of gambling in their community than did Colorado respondents; mixture of responses)

270. Loren C. Scott & Associate (2003). *The economic impact of a new racetrack on horse racing in Louisiana. Prepared for The Louisiana Racing Commission.* Baton Rouge, LA: Loren C. Scott & Associate.

*In this report we have examined the recent history of horse racing in the U.S. and Louisiana. We have also built econometric models to determine the impact of introducing slot machine at racetracks and the impact of introducing a fifth racetrack in Louisiana that would be either just a live racing track or a racino.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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271. Loro, P. S. (2004). Golden-age gambling: Psychological benefits and self-concept dynamics in aging consumers' consumption experiences. *Psychology & Marketing*, 21(5), 323-349.

*Phenomenological investigation of casino gambling among older consumers yields the identification of the psychological benefits of this consumption experience for this population. Control, Lift, and Escape emerge as central themes as older consumers' gambling experiences unfold, and the elements and psychological outcomes of each of these themes are discussed. Through interpretive analysis, a conceptual framework is developed in which these factors serve an intermediary role between the more shallow hedonic responses of "fantasies, feelings, and fun" (Holbrook & Hirschman, 1982) and deeper aspects of the self. It is proposed that the psychological benefits of gambling and other forms of experiential consumption may ultimately reinforce and enhance seniors' self-concepts.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Colorado -- Black Hawk

United States -- Colorado -- Central City

**Years Impacts Examined:** 2003?

**Impacts:** Social: Increased Subjective Well Being (The primary contribution of this research lies in the explication of three important psychological benefits [i.e., Control, Lift, and Escape derived from gambling by older consumers])

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272. Louishomme, C. (2003). Competing for growth: The exceptional case of gaming. *American Behavioral Scientist*, 46(8), 1104-1125.

*Contrary to what the urban political economy literature would lead us to predict, riverboat casinos have increasingly faced strong, organized opposition in many states across the country despite the large amounts of private investments, jobs, and tax revenues generated by casino developments. Yet at the same time, no such significant opposition has developed to successfully challenge the granting of large public subsidies to other private businesses by state and local governments. The author argues that this anomaly is explained by the mobilization of nationally organized interest groups that are successful in framing gaming as a moral, expressive issue, not only an instrumental strategy of economic development. These groups have been able to exploit the decentralization and fragmentation of the political system by exerting influence in several arenas, including citizen referenda, legal appeals, and legislative action.*

**Type:** Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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273. MacDonald, M., McMullan, J. L. and Perrier, D. C. (2004). Gambling households in Canada. *Journal of Gambling Studies*, 20(3), 187-236.

*This paper examines the distribution of gambling dollars in Nova Scotia, Saskatchewan and Canada and studies the*

*impact of this spending on households. We focus first on how gambling expenditures are related to the level and source of household income as well as to other demographic characteristics such as age, education, household composition, geographical area, and sources of income. Next we analyze how gambling expenditures are distributed among those households that gamble. We show how expenditure patterns differ in the intensity of gambling as measured by the proportion of household income or total amount of dollars spent on gambling. Then we study the effects that gambling has on spending on household necessities, changes in net worth, retirement savings and household debt. Finally we determine whether gambling expenditures act as a substitute or a complement to other recreational spending on entertainment products and services. Throughout the paper we offer a comparative analysis of provincial and national data.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** All Gambling

**Location(s):** Canada

Canada -- Nova Scotia

Canada -- Saskatchewan

**Years Impacts Examined:** 1996; 1997

**Impacts:** Economic: Changes in Business Revenue (our data suggest that the spread of gambling is effectively rearranging household entertainment and discretionary spending in order to capture local consuming households as gamblers.)

Social: Increased Socioeconomic Inequality (Low income households are over-represented in the top gambling expenditure quintiles and spend a larger percentage of their income on gambling products than do other household income groups; The convenience and new expedience of gambling in Canada has contributed to a regressive relationship whereby the economic costs of gambling are increasingly borne by those who can least afford the financial costs and related social problems.)

274. MacLaurin, T. and MacLaurin, D. (2003). Casino gaming and tourism in Canada. *International Journal of Contemporary Hospitality Management*, 15(6), 328-332.

*This study provides background information on the casino gaming and tourism industries in Canada. The historical, regulatory, developmental, and subsequent growth to the present size and scope of the Canadian casino gaming industry is profiled. There are currently 64 full-service casinos in Canada. Net revenue from government-operated lotteries, video lottery terminals (VLTs) and casinos increased from \$2.7 billion in 1990, to \$9.0 billion in 2000, generating more than \$5 billion in profits for Canadian governments. Employment in the gambling industry increased from 12,000 in 1992 to 41,000 in 2001. Casino gaming is currently the fastest-growing component of the Canadian tourism industry. Current Canadian casino gaming markets are identified and suggestions made for possible future directions in this high growth industry.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

275. Madden, M. K. (1991). *Economic and fiscal impacts associated with the first year of gaming: Deadwood, South Dakota*. Pierre, SD: South Dakota Commission on Gaming.

**GOOD QUALITY****Type:** Original Research; Secondary Analysis**Gambling Format:** Casinos; Lotteries; Indian Gaming -- Casinos; Electronic Gambling Machines (EGMs)**Location(s):** United States -- South Dakota**Years Impacts Examined:** 1987-1991

**Impacts:** Economic: Increased Government Revenue (6.2% of state general revenue fund in 1991); Changes in Business Revenue (positive for eating/drinking establishments; negative impact on recreation and apparel sectors)  
Social: Increased Employment (addition of 2,500 jobs in associated businesses); Increased Problem Gambling and Related Indices (mixed results with respect to divorces, food stamp recipients, child neglect, etc.; bankruptcy rates increased in first two years post-gambling introduction)

276. Madhusudhan, R. G. (1996). Betting on casino revenues: Lessons from state experiences. *National Tax Journal*, 49(3), 401-412.

*The results of a study indicate that casinos can provide major economic benefits, but they represent a limited and unstable revenue base. Policymakers must weigh the social costs against the potential benefits.*

**Type:** Secondary Analysis**Gambling Format:** N/A**Location(s):** N/A**Years Impacts Examined:** N/A**Impacts:** N/A

277. Mallach, A. (2010). *Economic and Social Impact of Introducing Casino Gambling: A Review and Assessment of the Literature*. Philadelphia, PA, Federal Reserve Bank of Philadelphia.

*Casinos can produce significant economic effects in the communities and regions in which they are located, although the effects vary widely. The size of the local or regional effect depends most significantly on how many visitors the casino draws from outside the area, thus reducing displacement of existing economic activity, and the number of jobs it generates within the area, thereby increasing the multiplier effect of the casino. Although casinos generate significant public revenue effects, the net effect is difficult to estimate because the extent to which casinos displace other public revenues, such as lotteries, has to be determined and because there is a paucity of detailed assessments of public costs. Even so, in most states the rate of taxation of casinos is substantially higher than the level at which other sectors are taxed; therefore, the net effects are likely to be positive. The effects of casinos on local public revenues, however, are much more mixed because state tax regimes retain most casino revenues at the state level, often allowing only a small part of the total public revenue stream to go to local governments. The incidence of casino taxes on consumers (OR households) is likely to be highly regressive. There are also significant social effects associated with casinos, which may include increases in pathological gambling, crime, and personal bankruptcy; however, there is no consensus in the literature on either the magnitude of these effects or the costs they impose on society and the economy. So far, the experience in Pennsylvania suggests that the introduction of casinos has had a positive economic and fiscal impact, particularly to the extent that Pennsylvania's casinos are drawing gamblers who previously would have traveled to Atlantic City or other out-of-state locations. The same is likely to be true of Philadelphia's casinos; however, it is unclear whether the benefits realized by the host community will be adequate to offset local costs. Whether the short-term benefits will be sustained over the long term remains to be seen. In addition, in evaluating the effects of casinos in Philadelphia, it is important to take into account the opportunity costs associated with developing a substantial part of the city's waterfront for casinos rather than for other facilities. With the imminent addition of table games to Pennsylvania's casinos, the casinos in*

*Philadelphia are likely to further undermine the Atlantic City casino industry, which is already showing significant declines in visitation and revenues.*

#### **GOOD QUALITY**

**Type:** Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States - Pennsylvania

**Years Impacts Examined:** N/A

**Impacts:** N/A

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278. Marfels, C. (1997). Economic impact of legalized casino gaming in the Nova Scotia and Ontario markets. *Gaming law review*, 1(1), 91-96.

*In order to determine the economic impact of Canadian casinos on the local economies, this article will examine the Nova Scotia and Ontario markets.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** Canada -- Ontario

Canada -- Nova Scotia

**Years Impacts Examined:** 1994-1996

**Impacts:** Economic: Increased Government Revenue (65% of the net proceeds of the Halifax casino go to the public purse.); Increased Infrastructure Investment (Total construction costs amounted to \$47.4 million dollars, which represents 2% of the total output of the Nova Scotia construction industry in a typical year).

Social: Increased Employment (the total employment effect from [Nova Scotia] casino operations was much larger, estimated at an FTE of 607 jobs and an income (excluding benefits) of \$15.2 million for the balance of the six-month operations period in 1995)

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279. Marfels, C. (1998). Development or dreamfield delusions? Assessing casino gambling's costs and benefits--A comment on an article by Professors Grinols and Omorov. *Gaming law review*, 2(4), 415-418.

*In their recent article, Grinols and Omorov claim that casino gaming creates social costs between \$39 billion and \$145 billion annually in the U.S. economy; furthermore, they predict that the introduction of casino gaming to a "state like Iowa or Illinois" would create additional costs of \$42 billion annually. Such numbers are of such astronomic proportions that, if true, they would indeed cast a dark cloud over casino gaming. However, a closer inspection of the procedure and "analysis" used to arrive at these numbers reveals serious flaws.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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280. Marshall, D. C. (1998). Missing the jackpot? The proliferation of gambling in Australia and its effect on local

communities. *Australian Geographical Studies*, 36(3), 237-247.

*Research assessing the consequences of gambling proliferation fails to recognise the influence of local circumstances on its costs and benefits. The consequences of new gambling facilities need to be assessed at the community level. The introduction of poker machines to hotels in the South Australian town of Peterborough has exacerbated pre-existing socio-economic problems associated with the wider effects of the rural crisis. The growth of gambling worldwide requires new policies that reflect the current geographies of gambling.*

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- South Australia -- Peterborough

**Years Impacts Examined:** 1996

**Impacts:** Economic: Changes in Business Revenue (hotels hosting EGMs have reported increased profits; all other firms and organizations seeing declines in turnover and revenue)

Social: No Impact on Employment; Increased Negative Attitudes (most residents view machines as having a negative impact on the town though improved entertainment, better food, etc. were recognized)

281. Marshall, D. C. and Baker, R. G. V. (2002). The evolving market structures of gambling: Case studies modelling the socioeconomic assignment of gaming machines in Melbourne and Sydney, Australia. *Journal of Gambling Studies*, 18(3), 273-291.

*The expansion of gambling industries worldwide is intertwined with the growing government dependence on gambling revenue for fiscal assignments. In Australia, electronic gaming machines (EGMs) have dominated recent gambling industry growth. As EGMs have proliferated, growing recognition has emerged that EGM distribution closely reflects levels of socioeconomic disadvantage. More machines are located in less advantaged regions. This paper analyses time-series socioeconomic distributions of EGMs in Melbourne, Australia, an immature EGM market, and then compares the findings with the mature market in Sydney. Similar findings in both cities suggest that market assignment of EGMs transcends differences in historical and legislative environments. This indicates that similar underlying structures are evident in both markets. Modelling the spatial structures of gambling markets provides an opportunity to identify regions most at risk of gambling related problems. Subsequently, policies can be formulated which ensure fiscal revenue from gambling can be better targeted towards regions likely to be most afflicted by excessive gambling-related problems.*

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- Victoria -- Melbourne

Australia -- New South Wales -- Sydney

**Years Impacts Examined:** 1993-1998

**Impacts:** Social: Increase Socioeconomic Inequality (Less advantaged areas have greatest concentrations of machines whilst progressively lower concentrations of machines are evident up the socioeconomic scale.)

282. Martin, J. (2006). *An impact analysis of tribal government gaming in California*. Riverside, CA: Center for California Native Nations, University of California, Riverside.

*This study evaluates the social and economic impacts of tribal government gaming operations on tribal and local governments in California. We compare changes in key indicators of well being between 1990 and 2000 across tribal governments in California that opened a gaming facility during the 1990s and those that did not. We also*

compare tribal governments in California to those in the rest of the United States and to state and national averages. To examine tribal government gaming impacts since 2000, when the state's primary tribal-state compact was ratified, we present surveys of tribal and local government officials.

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- California

**Years Impacts Examined:** 1990; 2000

**Impacts:** Economic: Increased Personal Income (real average income per capita rose higher among tribes with gaming facilities than those without gaming; tribal governments with gaming in California experienced a reduction in the percentage of families in poverty going from 36% in 1990 to 26% in 2000; From 1990 to 2000, the gaming tribes in California experienced a reduction in the percentage of those with less than 9th grade education going from 11% to 6.3%; on the contrary, the non-gaming tribes went from 12.4% to 14.5%)

Social: No Impact on Employment (In California Indian country, the unemployment rate was above 17% regardless of the tribe's gaming status.)

283. Maryland Department of Fiscal Services (1995). *Projected impact of casino gambling in Maryland*. Annapolis, MD: Department of Fiscal Services.

*This report estimates the impact casino gambling would have on Maryland's economy -- i.e., jobs created, economic output and earnings. It also estimates the potential impact on the state lottery, the horseracing industry and charitable gaming operations in the state. It includes an estimate of the potential state and local revenues that may result from casinos, and it addresses potential costs related to pathological gambling and increased public safety concerns.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

284. Mason, P. M. and Stranahan, H. (1996). The effects of casino gambling on state tax revenue. *Atlantic Economic Journal*, 24(4), 336-348.

*A theoretical model of state tax structure implies that revenue enhancement due to the introduction of casino gambling is less likely in states where income taxes do not exist and where casino tax rates are lower than the corresponding tax rates on sales taxable and excise taxable goods. Further, it is clear that casino gambling is likely to adversely impact lottery tax revenues earmarked for education. Due to the cross-price effects of gambling, tax revenues will likely decline in states that introduce casino gambling on Indian reservations. In the longer term, as casino gambling proliferates increasing competition among states, there will be negative revenue consequences due to fewer tourism and employment dollars.*

**Type:** Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A



**Impacts:** N/A

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285. Masterman-Smith, H., Martin, S. and McMillen, J. (2001). *Social and economic impacts of gambling in New Zealand: Final report*. Sydney: Australian Institute for Gambling Research, University of Western Sydney.

*The aim of this study is to provide independent information on the private and public costs and benefits of gaming (both social and economic) in New Zealand. This information will: assist the Department of Internal Affairs to assess the public and private impacts (both social and economic) of gaming in New Zealand; assist the Department of Internal Affairs to advise the Minister on a range of policy issues relating to the public and private impacts of gaming (both social and economic) in New Zealand; and assist in the development of gambling impact assessment policy as part of the New Zealand government's overall approach to gaming.*

**Type:** Original Research; Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** New Zealand

**Years Impacts Examined:** N/A

**Impacts:** N/A

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286. Matkova, K. (2008). *Residents' and tourists' perspectives on potential introduction of casino industry and its role in tourism and community development: The case of the Republic of Cyprus*. Canada: University of Waterloo (Canada). M.E.S.

*For years, the gambling industry has been gaining popularity among a variety of countries and communities for its contribution to tourism development and thus, to the economy. At the same time, the addictive nature of the gambling activities poses questions for society's future wellbeing. In the Republic of Cyprus, tourism is a major economic activity. Recently, some of the local practitioners of tourism lobbied government to allow the introduction of the casino industry to increase tourists' arrivals, enhance their experience, as well as limit the number of travelers who go to the bordering Turkish Republic of Northern Cyprus for casino-gambling. However, the potential adverse impacts of gambling on the local community cannot be overlooked as a factor in decision-making. As a result, this study explores the implications for the Greek-Cypriot community development of introducing casino-style gambling as a part of the tourism development strategy. This study's findings suggest that while the literature does indicate that there can be some possible immediate direct economic benefits from the introduction of casinos to local economies, those benefits are not demonstrated in this particular investigation. The findings were derived from a literature review, nineteen interviews, and two hundred and twenty surveys completed by tourists and local residents in Cyprus. They revealed mixed responses to the introduction of the casino industry. During the course of the data analysis and interpretation, it was identified that tourists are not as interested in seeing casinos introduced to Cyprus as were some local residents. If that is the case, on the basis of this study there does not appear to be a persuasive argument for introducing casino-style gambling to promote tourism on the island. Moreover, there are some potentially negative effects of gambling that could adversely affect the tourism industry and local culture.*

**Type:** Original Research; Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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287. May-Chahal, C., Volberg, R., Forrest, D., Bunkle, P., Paylor, I., Collins, P. and Wilson, A. (2007). *Scoping study for a UK Gambling Act, 2005 impact assessment framework*. London: Department for Culture Media and Sport.

*This summary section performs three functions. First, it briefly sets out the background to the issue of measurement of social costs and benefits. Second, it summarises what international research has to teach about the possible social and economic impacts of the new casinos. Third, it presents a series of alternative research strategies designed to measure the expected impacts of the new Gambling Act, 2005 casinos for consideration. The main report covers each of these areas in more detail and additionally considers the measurement of impacts of gambling developments outside casinos, in particular, the expansion of Internet gambling and machines outside casinos.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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288. Mays, G., Casillas, C. and Maupin, J. R. (2007). The impact of Indian gaming on crime in New Mexico: A research note. *The Social Science Journal*, 44(2), 375-381.

*The complexity of the relationship between gambling and crime make empirical establishment of a relationship between the two difficult. Focusing on one state, we examine the impact of Indian gaming on crime in New Mexico. Specific crime rates in New Mexico counties with tribal gaming are discussed. Comparisons of the rates of specific crimes are made between New Mexico counties with tribal gaming and those without.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Indian Gaming -- Casinos

**Location(s):** United States -- New Mexico

**Years Impacts Examined:** 1991-1999

**Impacts:** Social: No Impact on Crime (The data available to address the research questions are inadequate, making the ability to examine conclusively the relationship between crime rates in New Mexico and the creation and expansion of tribal gaming extremely problematic. While there may be a perceived increase in crime by the public, it cannot be attributed directly to the state's casinos. While some counties reported crime increases in the key years examined, those increases were not significant.)

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289. McCleary, R., Chew, K. S. Y., Merrill, V. and Napolitano, C. (2002). Does legalized gambling elevate the risk of suicide? An analysis of US counties and metropolitan areas. *Suicide and Life-Threatening Behavior*, 32(2), 209-221.

*This study addresses a possible link between suicide and casino gambling. Resident suicide rates are analyzed for (a) a 1990 cross-section of 148 U.S. metropolitan areas and (b) before and after the advent of legalized casinos in five U.S. counties. Data are drawn from government and gaming industry sources. In cross-section, metro area suicide is strongly correlated with region, accidental death and homicide rates, age and race composition, and economic vitality, followed by a modest net positive correlation with casino presence. By contrast, the time series analysis yields no evidence of a gambling effect.*

**GOOD QUALITY****Type:** Original Research; Secondary Analysis**Gambling Format:** Casinos**Location(s):** United States**Years Impacts Examined:** 1990; 1970-1995

**Impacts:** Social: Increased Problem Gambling and Related Indices (Suicide -- mixed evidence; time series analyses of gaming and non-gaming counties show no changes in suicide that can be attributed to casino operation; cross-sectional analyses of metropolitan areas suggest that casino presence modestly elevates resident suicide rate).

290. McCrary, J. and Condrey, S. E. (2003). The Georgia Lottery: Assessing its administrative, economic, and political effects. *Review of Policy Research*, 20(4), 691-711.

*This article examines the Georgia lottery as a "policy laboratory" and its potential effect on state-level policy diffusion. The authors summarize an extensive research project they directed that included a survey of every state that offers a lottery, a general population survey of Georgia citizen attitudes toward the lottery, and results from an economic model summarizing the economic effects of the lottery. The analysis reveals that the Georgia lottery has been a significant source of revenue for the state's budget and operates in an administratively cost-effective manner. The analysis also confirms the conventional wisdom that lower-income households spend a greater proportionate share of their income on the lottery and that African Americans are more frequent players than whites. Furthermore, the Georgia lottery enjoys broad public support, the key to which appears to be the earmarking of lottery funds to specific, new, popular education programs. However, the data reveal that those educational programs promulgated by the Georgia lottery benefit citizens from both high and low socioeconomic status. Finally, the article suggests that lottery-generated funds may reach a plateau or peak during the first decade of implementation and that state policymakers should design lottery-funded programs accordingly.*

**Type:** Original Research; Secondary Analysis**Gambling Format:** Lotteries**Location(s):** United States

United States -- Georgia

**Years Impacts Examined:** 1993-1999

**Impacts:** Economic: Increased Government Revenue; Increased Public Services (significant and successful source of revenue generation for the state's budget; state spending on education increased after implementation of the lottery with specific new educational programs the targets of these funds)

Social: Increased Employment (lottery has had a modest, positive economic impact on all of Georgia by creating new jobs and attracting new residents to the state); Increased Positive Attitudes (public provides tremendous support for the lottery as a result of the direct ties between lottery receipts and education programs); Increased Socioeconomic Inequality (lower-income households tend to spend a greater portion of their incomes on lottery play)

291. McGowan, R. (1999). A comment on Walker and Barnett's "The social costs of gambling: An economic perspective". *Journal of Gambling Studies*, 15(3), 213-215.

*Comments on the article by D. M. Walker and A. H. Barnett concerning the social costs of pathological gambling. The author states that the definition of "social costs" that Walker and Barnett utilize maintains that "the social cost of an action is the amount by which that action reduces aggregate societal real wealth." The author believes that this is a typical utilitarian definition and depends upon two assumptions: (1) the welfare or "happiness" that results*

*from an action such as gambling is the only thing that is intrinsically valuable; (2) the happiness or cost that results from every action can be measured. The validity of these assumptions are examined in terms of how they apply to gambling research.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

292. McLain, P. M. and Maheshwari, S. K. (2006). Impact of gaming industry on local employment and personal income. *Journal of Economics and Economic Education Research*, 7(3), 35-52.

*In the last decade gaming industry has grown steadily in the US. However, community debate still continues whether to treat the gaming industry as any other business or treat it as a negative business necessary only to revitalize a community or to increase the revenue base for a given city and the state. Different state and local authorities provide different arguments in favor or against the industry. The purpose of this research is to study the impact of gaming, mainly casino industry, on the local community and how the economic impact varies with the size of population in the local community. This research will focus only on the communities where casino has made entry during the period of 1990-2000.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Mississippi -- Gulfport

United States -- Tennessee -- Memphis

United States -- Louisiana -- Baton Rouge

United States -- Louisiana -- New Orleans

United States -- Iowa -- Des Moines

United States -- Indiana -- Gary

United States -- Michigan -- Detroit

United States -- Illinois -- Chicago

**Years Impacts Examined:** 1983-2002

**Impacts:** Social: Increased Employment (employment and per capita personal income show an increase after casino introduction; regional per capital personal income does not improve significantly if region was doing worse than national average pre-casino introduction; in economically deficient areas, casino industry brings lower paying jobs).

293. McMillen, J. (1991). Urban casinos as agents of development: Case studies from Australia. *Gambling and Public Policy: International Perspectives*. Eadington, W. and J. Cornelius. Reno, NV, Institute for the Study of Gambling and Commercial Gaming, 87-122.

*This analysis undertakes a conceptual discussion of the possible relationships of the presence of casinos in an urban environment, and social costs that occur in the community as a result. It derives from a compilation and analysis of existing pertinent social and economic data in Australian cities with casinos, before and after the casinos opened. A primary source of information was telephone interviews with public officials, law enforcement representatives, health service representatives, and others who might have insights into social effects and problems that may be linked to the presence of casinos in Australian cities.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** Australia

**Years Impacts Examined:** N/A

**Impacts:** N/A

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294. McMillen, J. (1998). *Study of the social and economic impacts of New Zealand casinos*. Sydney: Australian Institute for Gambling Research, University of Western Sydney.

*The research was designed to provide a balanced focus on both the costs and benefits of the two New Zealand casinos. That is, it would investigate the positive aspects of casino development, often promoted as the rationale for legalising casinos, and the negative effects of casinos in particular and increased gambling in general, such as the costs to some individuals and families. Moreover, the study would explore the relationships between social, economic and environmental impacts in an integrated research framework.*

**Type:** Original Research; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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295. McMillen, J. and Donnelly, K. (2008). Gambling in Australian Indigenous communities: The state of play. *Australian Journal of Social Issues*, 43(3), 397-426.

*Gambling has both positive aspects and negative effects for Australian Indigenous gamblers and families. While traditional card games organised by the communities themselves have been found to have important social value, there is increasing evidence that commercial gambling such as gaming machines ('pokies'), casinos and TAB betting has a range of far-reaching negative social and economic consequences for Indigenous population groups. However an understanding of participation by Indigenous people in contemporary gambling is still undeveloped and is dominated by western concepts. The cultural distinctiveness and complexity of Indigenous Australia create profound conceptual and methodological difficulties with the potential to distort the research process and outcomes, as well as policy solutions. The current lack of understanding also impacts on the cultural relevance and effectiveness of service provision for Indigenous gamblers, their families and communities.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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296. McMullan, J. L. and A. Rege (2010). Online crime and Internet gambling. *Journal of Gambling Issues*(24): 54-85.

*The spread of Internet gambling has raised several issues concerning motivations to gamble, consumer behaviour online, problem gambling, security of Web sites, and fairness and integrity of the games. Rather surprisingly, however, there has been little in the way of research regarding online crime and Internet gambling even though it is an urgent priority. This article addresses this absence by investigating the types, techniques, and organizational dynamics of online crime at the portals of Internet gambling sites. Our approach is qualitative in nature and explores, using document analysis, the activities of cybernomads, dot.con teams, and criminal networks. We demonstrate that there are different levels of criminal organization, distinguished by their complexity of division of labour; coordination of roles; purposefulness of association between criminals; and ability to avoid, evade, or neutralize security systems and law enforcement. We conclude by arguing that conventional understandings of real-world gambling-related criminal relationships have been altered by the digital environment of the Internet.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Internet gambling

**Location(s):** Worldwide

**Years Impacts Examined:** 2008?

**Impacts:** Social: Crime (Documented example of various types of online crimes related to Internet gambling. We conclude by arguing that conventional understandings of real-world gambling-related criminal relationships have been altered by the digital environment of the Internet.)

297. Meister, A. P., Rand, K. R. L. and Light, S. A. (2009). Indian gaming and beyond: Tribal economic development and diversification. *South Dakota Law Review*, 54(3), 375-397.

*How did Indian gaming become a multi-billion-dollar industry? What are its economic and fiscal impacts, both on and off the reservation? And what does the future hold for Indian gaming and tribal economic development? We take up each of these questions in turn.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

298. Meyer-Arendt, K. J. and Hartmann, R. (1998). *Casino gambling in America: Origins, trends and impacts*. New York: Cognizant Communication Corporation.

*Casino gambling is examined in terms of origins, present trends, and impacts. It is organized into five parts to provide overviews as well as case studies of the various sectors of the industry. Part 1 contains a comprehensive overview of modern casino gambling in America, and chapters on casino management, patterns of gambling in the traditional heartlands of Nevada and New Jersey and sets the stage for understanding the recent diffusion of gaming out from those centres. Part 2 is dedicated to Indian gaming, part 3 focuses upon the legalization of casino gaming in historic mining towns and evaluates the impacts of the latest boom in such traditional boom and bust economies. Part 4 presents trends and conflicts in riverboat and dockside gaming venues along the lower Mississippi River and Gulf coast. Part 5 presents case studies of land use impacts resulting from the introduction of gambling to three very different North American locales: within a traditional Mormon village, within a residential neighbourhood of Windsor, Ontario, Canada, and the development of video poker in South Carolina.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

299. Miller, G. (1995). *An investigation into the probable effects of the legalization of river boat gambling in Pennsylvania*. United States -- Pennsylvania: Kutztown University of Pennsylvania. M.P.A.

*There is, presently, a popular political and social movement in this country away from a proactive and powerful Federal Government. Americans see their central government as ineffectual, wasteful and unresponsive to their particular needs. This perception has led both major political parties to focus their attention on cutting the budget and therefore on the dissolution of many federal programs. Although the public is currently pleased with this effort, citizens expect to continue to receive the same services and levels of protection previously provided by the Federal Government. As this trend continues, state and local governments will be expected to increase their efforts and supply those services no longer provided by the central government. In order to accomplish this task, state and local governments will need to meet a difficult challenge. A method must be devised for these bodies to generate revenue without burdening residents with additional taxes. One possible solution to this dilemma that has been embraced by several states has been the legalization and taxation of riverboat casinos. On one side of the issue, the overall benefits enjoyed by states in which riverboats are currently operating make legalized gambling a tempting solution. Many experts feel, however, that the problems associated with legalized gaming make it a less attractive solution than many would believe. This paper will examine this issue of the legalization of riverboat casinos in an attempt to determine their likely overall impact on the State of Pennsylvania. First, it will scrutinize the states which have already passed riverboat legislation and compare and contrast their goals, processes, tax strategies and their level of success. It will then go on to look at arguments on both sides of the issue and weigh the benefits against the detriments to produce an overview of the probable impact of riverboat gaming on Pennsylvania. The study found that the taxation of riverboat casinos has produced a great amount of revenue in the five states that currently allow boats to operate. There is no question that riverboats create thousands of new jobs in both the state and the host communities. Many host communities have been able to use the revenue produced by taxing the riverboats toward the development of the local infrastructure. While the casinos did indeed create new jobs, their overall effect on the local economy also eliminated some jobs resulting only in a small net increase for employment in the areas that showed any increase at all. The increase in property costs in the area surrounding the casinos often resulted in the closure of business and restaurants that were unable to compete with the casinos. Furthermore, the data shows that local businesses do not display an increase in sales following the introduction of a riverboat. Communities that host riverboats have experienced an increase in criminal activity, and despite costly efforts to increase staffing and improve law enforcement agencies, crime rates continue to rise. Based on the findings in this study, it must be concluded that the legalization of riverboat gaming by the state of Pennsylvania would not be advisable.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

300. Miller, W. J. and Schwartz, M. D. (1998). Casino gambling and street crime. *Annals of the American Academy of Political and Social Science*, 556, 124-137.

*Although legalized gambling, and in particular casino gambling, has become an increasingly important American leisure activity, it has not escaped extensive controversy. Among the many evils forecast for communities that open casinos is a major increase in street crime. This article will review what we know about the relationship between street crime and casino gambling.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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301. Ministers Advisory Committee on the Social Impacts of Gaming (1994). *Report on the social impacts of gaming and the impact of gaming expansion on charitable beneficiaries*. Regina, SK: Saskatchewan Liquor and Gaming Authority.

*One of the tasks of the Committee was to make recommendations regarding future surveys for the purpose of monitoring potential social impacts and the impact on charitable gambling.*

**Type:** Original Research; Methodological Issues

**Gambling Format:** Lotteries; Bingo; Charitable Gambling – Break-Open Tickets; Raffles; Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Saskatchewan

**Years Impacts Examined:** 1993

**Impacts:** Social: Attitudes (perceived positive economic impact from lotteries and other charitable gaming; comments on VLTs were mixed with some saying they produced a net outflow of funds from rural communities; perception by some that problem gambling behaviours increased).

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302. Minnesota Department of Human Services (2007). *Social and economic costs of gambling: A report to the 2008 Minnesota Legislature*. St. Paul, MN: Adult Mental Health Division, Minnesota Department of Human Services.

*The 2007 legislature directed the Commissioner, Department of Human Services (DHS) to prepare a report by December 1, 2007, on the process and funding required to study the social and economic impact of gambling.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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303. Momper, S. and M. Dennis (2010). American Indian Women Report on the Community Impact of a Tribal Casino. *Race and Social Problems* 2(1): 59-68.

*This qualitative study of the community impact of a Midwest American Indian casino examined semi-structured*



*interview data (N = 20) from American Indian women. Results indicate that the opening of the tribal casino has provided opportunities for intergroup contact to occur resulting in improved relations between Indians on the reservation and those who are not Indian from surrounding communities. These improved relations are positively affecting the relationships that develop between the members of the communities. The findings highlight the need for social workers to examine the impact of intergroup contact that is naturally occurring in tribal casino communities and develop interventions that can assist in reducing stereotypes and prejudices.*

**Type:** Original Research

**Gambling Format:** Casinos (Indian)

**Location(s):** United States

**Years Impacts Examined:** 2004

**Impacts:** Social: Quality of Life / Public Attitudes (It is evident that the casino satisfies employee needs for employment and income. It is also evident, from reports by the Indian women of this study, that the casino milieu creates mutually beneficial relationships with others whether they are employees or patrons of the casino leading to a new sense of community.)

304. Montana Gambling Study Commission (1998). *The 1998 Montana gambling study: A report to the Governor and the 56th Legislature by the Gambling Study Commission*. Helena, MT, Montana Legislative Services Division, 1998.

#### GOOD QUALITY

**Type:** Original Research

**Gambling Format:** All formats (focus on EGMs)

**Location(s):** United States - Montana

**Years Impacts Examined:** 1997 - 1998

**Impacts:** Economic: Government Revenue (Cities and towns are particularly dependent on Video Gambling Machine Tax revenue.); Economic Impacts Related to Problem Gambling (Table 5 presents cost **estimates** for both inpatient and outpatient treatment corresponding to a range of percentages of problem gamblers seeking treatment. For example, the cost for outpatient services would be \$560,000 per year if 6 percent of past year probable pathological gamblers sought treatment; the report also **estimates** costs associated with a hypothetical \$1 million increase in VGM expenditures is at least \$32,250. -- though it is noted that It is difficult to reliably estimate small increases in criminal justice system costs). Business Revenue (Specifically, revenue and employment changes in gambling establishments—except those associated with nonresident spending—will not make the Montana economy larger or smaller or cause it to grow faster or slower. NOTE: From an overall state-level perspective); Government Revenue (Similarly, the fluctuations in indirect taxes—income and property taxes—associated with changes in revenue and employment of gambling establishments and their linked industries will theoretically be counterbalanced by opposite changes elsewhere.)

Social: Problem Gambling (Among lifetime Montana problem or probable gamblers, about 10 percent have filed for bankruptcy. Approximately 4 percent of Montanans with no lifetime gambling problems have filed for bankruptcy; also includes some basic details on alcohol problems, depression and attempted suicide.). Employment (Specifically, revenue and employment changes in gambling establishments—except those associated with nonresident spending—will not make the Montana economy larger or smaller or cause it to grow faster or slower. NOTE: From an overall state-level perspective); Crime (lack of a systematic pattern in crime rate changes between Montana cities and those in states with little or no gambling.)

305. Moore, P. G. (1997). Gambling and the UK National Lottery. *Business Ethics: A European Review*, 6(3), 153-158.

*The British National Lottery has now been running for almost three years and it arouses social and ethical misgivings in several quarters, whether in its contribution to the British gambling scene or in the size and distribution of its prizes or in its contributions to the good causes which it was introduced to benefit. Bringing wide experience and an expert eye to analyse and comment on the lottery, Dr Moore, DSc PhD FIA, is Emeritus Professor of Decision Sciences at London Business School, Sussex Place, Regent's Park, London.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

306. Morse, E. A. and Goss, E. P. (2007). *Governing Fortune: Casino Gambling in America*. Ann Arbor, MI: University of Michigan Press.

*Governing Fortune is composed of two distinct parts, reflective of the two questions that guide this study and the backgrounds of the two authors. The first five chapters provide an overview of the casino industry and offer an assessment of both its economic benefits, commonly touted by gambling proponents, and its social costs, impacts which the authors argue are much more difficult to capture and, as a result, more likely to be ignored or minimized in policy debates. Drawing on an array of data sources and employing relatively simple forms of analysis, the authors examine the economic consequences of casino gaming on a number of dimensions, most of which will be familiar to those toiling in this area. The findings generally fall on the plus side, especially the overall financial profitability of these operations, but the results are not nearly as uniform as one might suspect. For instance, while they find that casinos have a positive influence on local employment patterns they do not appear to produce long-term increases in personal income. Similarly, casinos generate public revenue streams as predicted but apparently not the corresponding tax relief as promised.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States

**Years Impacts Examined:** 1995-2004

**Impacts:** Economic: Increased Government Revenue (however, casinos have not reduced the relative tax burdens of residents in states with commercial casinos); Increased Public Services (casinos appeared to produce increases in relative public spending on areas such as education and parks and recreation); Decreased Personal Income (casinos reduce per capita income, and the reductions get larger as the casino remains in the county.)  
Social: Increased Employment (casinos, both tribal and commercial, create substantial job opportunities in terms of new jobs and lower unemployment rates. Furthermore, the gains tend to grow as the casino remains in the county.)

307. Moubarac, J.-C., Shead, W., Derevensky, J.L. (2010). Bingo playing and problem gambling: A review of our current knowledge. *Journal of Gambling Issues* (24): 164-184.

*Bingo has a long history as a popular gambling game. Previous research on bingo has been almost exclusively limited to qualitative research. Consequently, little is known about the prevalence of bingo playing, the potential risks associated with regular bingo playing, and its possible influence on the development of problem gambling. The present paper provides a review of the literature on bingo in Western countries using published articles focused on*

bingo and reports of broad-based gambling surveys containing data on bingo participation. Available data show relatively high rates of past-year bingo participation among adolescents. Within the adult population, females and individuals in poor health reported the highest bingo participation rates. Three general groups of bingo players were identified: low-income individuals, seniors, and young adults. It is argued that although bingo is generally viewed by the public as a “soft” form of gambling, it has the potential to lead to significant problems.

**Type:** Secondary Analysis

**Gambling Format:** Bingo

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

308. Moufakkir, O. (2002). *Changes in selected economic and social indicators associated with the establishment of casinos in the city of Detroit: A case study*. United States -- Michigan: Michigan State University. Ph.D.

Several cities have introduced casino gaming in their jurisdictions in the hope of increasing tax revenues, employment and tourism activity. Although legalized casino gaming has emerged as a popular alternative economic development strategy for communities of all sizes, it remains controversial. Those who advocate gaming argue that it has positive economic impacts, but casino development opponents disapprove and raise issues concerning the social impacts of casino gaming on people and communities. Relevant studies present mixed results in part because of differences across communities and/or scale and type of casino development involved. Detroit, one of many economically troubled cities, has adopted casino gaming as an economic development strategy, which is designed to enhance the city's tourism and entertainment offerings. The passage of Proposal E by Michigan voters allowed the city to establish up to three land-based commercial casinos. The first Detroit casino opened in 1999. Detroit provides a new setting in which pre and post casino gaming development can be examined. Thus the focus of this study was to investigate changes in selected social and economic indicators following the establishment of casinos in the City of Detroit. The embedded single-case study, the single group time-series and time-series with non-equivalent control group designs were the research techniques employed in this study. Findings of this study suggest that Detroit's casinos are relatively effective in contributing to the tourism activity in the community and in generating tax revenues for government. Twenty-one percent of casino visitors were non-locals. Conservatively, these visitors contributed an estimated \$165 million to the local economy, generated \$60.6 million in personal income, \$98.2 million in value added and over 7,500 direct jobs and over 4000 indirect jobs. In 2001, the three casinos generated \$1.6 billion in gross gaming revenue and \$181 million in taxes for the City of Detroit and the State of Michigan. In 2000, \$73 million in gaming revenues remained in Detroit that would have otherwise been spent at Casino Windsor in Michigan across the border in Canada. Also, findings suggest that crime did not increase following casino gaming development. Bankruptcy filings in Detroit did not increase immediately after the casinos opened in the city but did increase in 2001. However, these figures should be interpreted cautiously because of the events of 9/11/2001 and the emergence of a significant economic recession. Results of this study generally support casino gaming development. However, to generalize beyond the data considered in this study is not advisable. There is a need to examine a host of additional variables for a more comprehensive analysis.

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Michigan -- Detroit

**Years Impacts Examined:** 1996-2001

**Impacts:** Economic: Increased Government Revenue (for city and state; \$181-M in 2001; diverted \$73-M in gaming revenue that would otherwise have been spent at Casino Windsor in Canada); Increased Business Revenue (21% of casino visitors non-locals; worth \$165-M to local economy)

Social: Increased Employment (creation of 7,500 direct jobs and 4,000 indirect jobs); Increased Problem Gambling

and Related Indices (Bankruptcies did not increase immediately after 1999 casino openings but did increase in 2001)

309. Murray, P. (1996). *Impact of casinos on horse racing. Current issue paper (Ontario. Legislative Library, Research and Information Services); no. 174.* Toronto, ON: Ministry of Government Services.

*This paper provides an overview of the current state of the North American gaming industry and examines the impact the introduction of casinos has had on horse racing in a number of jurisdictions. It then looks at attempts by the horse racing industry, and legislators, to respond to the restructuring which is occurring in the gaming industry as a result of the proliferation of casinos. Finally, the paper considers the implications of casinos for the future of the Windsor Raceway and the Fort Erie Race Track.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

310. MWH New Zealand Ltd and Centre for Gambling Studies University of Auckland (2003). *Social impact assessment of Class 4 gambling on the Hastings district community.* Wellington, New Zealand: MWH New Zealand.

*This social impact report is the outcome of a study undertaken for Wairoa District Council to assist it in developing and adopting a class 4 venue policy in accordance with the Act. It is the result of a investigation of the social, economic, cultural and environmental aspects of gambling that may affect the district. The study was undertaken by a team of investigators from MWH NZ Ltd and the Centre for Gambling Studies, University of Auckland in November 2003.*

**Type:** Original Research

**Gambling Format:** Electronic Gaming Machines (EGMs)

**Location(s):** New Zealand -- Wairoa District

**Years Impacts Examined:** 2002-2003

**Impacts:** Economic: Increased Government Revenue; Increased Public Services (Class 4 gambling is estimated to take some \$2.33M out of the Wairoa community, of which \$770,000 could be estimated to be returned through grants. However, it is likely that the national trusts are contributing one-third of the national average return to the community)

Social: No Impact on Employment; Increased Negative Attitudes (perception of problem gambling increase and exacerbating current social issues)

311. Myers, M. E. (2000). *The perceived economic, social, and cultural impacts of gaming on a Michigan Indian tribe.* United States -- Michigan: Western Michigan University. D.P.A.

*The economic, social and cultural effect of tribal gaming on a Michigan Indian tribe is the focus of this study. Twelve individuals, identified as knowledgeable informants, were interviewed on how the tribal community has been impacted by the successful gaming operations and whether the nature of the gaming enterprises was an important factor. During the interview process, the members of the community defined the changes in their lives*

resulting from the large amount of income that was benefiting this previously impoverished community. The participants were asked to describe, in their own words, important changes that had occurred in their personal, family, community and cultural lives. Individuals described their attitudes toward the gaming operations, per capita payments, community programs and social problems that were created with the coming of the casinos. While the focus of this study was on the effect of gambling as an economic development tool, to the majority of those interviewed the source of the money was not a major factor. Rather the amount of the money, the ensuing rapid pace of economic change and social conflict were the defining events. The tribe's economic status and infrastructure have radically improved but at the cost of a loss of community cohesiveness. A striking theme that emerged from the interviews was the countervailing trends of rediscovery and strengthening of traditional Native American culture and the new found material wealth being experienced by the tribe which is creating an Indian middle class.

**Type:** Original Research

**Gambling Format:** Indian Gaming--Casinos

**Location(s):** United States -- Michigan

**Years Impacts Examined:** 1998-1999

**Impacts:** Social: Changed Attitudes (positive regarding economic development impact; led to changes in the pace of life and quality of life); Decreased Social Capital

312. Napoli, M. (2002). Native wellness for the new millennium: The impact of gaming. *Journal of Sociology & Social Welfare*, 29(1), 17-34.

*The challenges confronting native people have been studied over the years. Their plight in dealing with alcoholism, colonization, poverty and health and mental health problems still exists outnumbering all other minority groups in the United States. For decades, Native people have relied upon the federal government to provide services, which were often not sensitive to Native values. During the last decade, gaming has given Native people have an avenue to enter higher education, develop tribal enterprises, tribal courts and health and mental health programs that meet the needs of their communities. Most importantly, native people have reclaimed their independence. Since gaming is new to tribal life there are drawbacks and limitations. nevertheless, the benefits seems to outweigh the limitations. This article will focus on how Native gaming has contributed restoring balance and wellness in native communities.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

313. National Institute of Economic and Industry Research (1997). *The impact of gambling on Victorian employment: A report for the Victorian Casino and Gaming Authority*. Melbourne, Australia: Victorian Casino and Gaming Authority.

*This report examines the impact of increased gambling expenditure in Victoria on overall Victorian employment. The report focuses on the period 1992 to 1996. The report identifies both direct and indirect gambling related employment.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- Victoria

**Years Impacts Examined:** 1992-1996

**Impacts:** Social: Changed Employment (addition of 14,000 positions from 1990-1996; may have displaced jobs in other sectors, other sectors of gambling industry in Victoria and/or other states)

314. National Institute of Economic and Industry Research (2000). *The economic impact of gambling: Project report*. Melbourne, Australia.

*The present study was commissioned: to complement social impact studies; and to investigate further the economic impact of the increase in gambling.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- Victoria

**Years Impacts Examined:** 1992-1998

**Impacts:** Economic: Changes in Business Revenue (insufficient evidence to determine relationship between gambling and other expenditures... but there have been increasing expenditures on alcohol, tobacco and meals away from home; gambling often financed from savings rate but it is likely that gambling will be substituted for other household expenditures over time; those substitutions yet to be identified)

Social: Increased Employment; Increased Problem Gambling (increase in problem gambling... though perhaps a once-only event representing a response to the increase in availability)

315. National Institute of Economic and Industry Research and Spiller Gibbins Swan Pty Ltd. (1997). *Impact of the expansion in gaming in the Victorian retail sector: A report for the Victorian Casino and Gaming Authority*. Melbourne, Australia: Victorian Casino and Gaming Authority.

*This report examines the increased gambling expenditure in Australia on the retail sector, with particular emphasis on Victoria. The analysis focuses on the period 1990 to 1996. In relation to Victoria, the study was to provide insight into the perceived causes of the decline in sales and profits of retail businesses in Victoria since the introduction of EGMs and the opening of Crown Casino.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- Victoria

**Years Impacts Examined:** 1990-1996

**Impacts:** Economic: Decreased Business Revenue (While at the state level there is little evidence to suggest that increased gambling expenditure adversely affected the retail industry generally, on a geographical basis some areas and industries in Melbourne and Victoria have probably been affected; the long run impacts of increased gambling activity on the retail sector may be much more severe; increased gambling expenditure has been financed by lower savings.)

316. National Opinion Research Center, Gemini Research, The Lewin Group and Christiansen/Cummings

Associates (1999). *Gambling impact and behavior study. Report to the National Gambling Impact Study Commission*. Chicago: University of Chicago.

*The National Opinion Research Center at the University of Chicago, in collaboration with Gemini Research, The Lewin Group, and Christiansen/Cummings Associates, collected or assembled and analyzed five new data sets on gambling behavior, problems, and attitudes. Three data sets were national surveys (2,417 adults at home via telephone, 530 adults intercepted in gaming facilities, and 534 adolescents (16 and 17 years of age) at home via telephone), and the other two were a 100-community statistical data base and ten community case studies on the effects of casino openings.*

#### **EXCELLENT QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1980-1997

**Impacts:** Economic: Changes in Business Revenue (increases are seen in earnings in hotel and lodgings (+43%) and recreation and amusement industries (+22%); however, these start from quite small bases; drop-off in income from restaurants and bars)

Social: Increased Employment (about one percentage point is taken off the unemployment rate; decrease is also seen in the receipt, on a per capita basis, of income-maintenance (welfare) dollars (-13%), unemployment insurance (-17%), and other transfer payments (-3%), which may be associated with the drop in local government employment; increase in the employment rate in construction trades); No Impact on Crime (casino effect is not statistically significant for any of the bankruptcy or crime [persons/property; embezzlement/fraud not analyzed] outcome measures); No Impact on Problem Gambling and Related Indices (casino effect is not statistically significant for any of the bankruptcy or crime outcome measures)

317. New Hampshire Gaming Study Commission (2009). *New Hampshire Gaming Study Commission: Interim progress report*. Concord, NH: New Hampshire Gaming Study Commission.

*The July 16, 2009 Executive Order that created the New Hampshire Gaming Study Commission directs it "to undertake a thorough and comprehensive review of various models for expanded gaming and their potential to generate state revenues, as well as an assessment of the social, economic and public safety impacts of gaming options on the quality of life in New Hampshire."*

**Type:** Scoping Study; Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

318. Ng, Y.-K. (2006). Some policy implications of behavioral economics and happiness studies for Singapore: With special reference to casinos. *The Singapore Economic Review*, 51(1), 1-18.

*Behavioral economics is the study of economic behavior beyond the traditional simple economic models of constrained maximization with purely economic objectives (consumption/profits). Some policy implications of the findings of behavioral economics, happiness studies and beyond are outlined, with special reference to excessive volatility in business cycles and the optimal level of public spending. Though behavioral economics potentially*

*provides more support for the restriction of gambling, an outright ban need not be optimal. Though legal casinos may increase some crimes, it will decrease crimes associated with illegal gambling. Some restrictions of problem gambling will be needed. Apart from (if not rather than) the attraction of tourists/visitors, the consumer surplus associated with responsible pleasure gambling is likely to be the major benefits of legalizing casinos. The proposed entry fee may be better replaced by a membership system, as the former is unfair to locals and will lead to unhealthy gambling.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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319. Nichols Applied Management (1993). *Economic impacts of the Alberta gaming industry / prepared for Alberta Lotteries and Gaming by Nichols Applied Management*. Edmonton, AB: Alberta Lotteries and Gaming.

**Type:** Original Research

**Gambling Format:** Horse Racing; Lotteries; Charitable; Casinos

**Location(s):** Canada -- Alberta

**Years Impacts Examined:** 1983-1992

**Impacts:** Economic: Increased Government Revenue (\$132 million in 1991/1992); Increased Public Services (\$214 million accrued to non-profit organizations in 1991/1992)

Social: Increased Employment (economic impact equivalent of 8,600 to 9,600 jobs)

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320. Nichols, M., Giacomassi, D. and Stitt, B. G. (2002). Casino gambling as a catalyst of economic development: Perceptions of residents in new casino jurisdictions. *Tourism Economics*, 8(1), 59-75.

*Using survey data gathered in 1999 from eight new US casino jurisdictions, this research examines citizens' perceptions of casino gambling as a tool of economic and tourism development. In particular, the paper examines whether residents perceive that casinos have revitalized their communities by rejuvenating the local economy, attracting new industries and increasing tourism, or whether the impact has been more negative, resulting in, for example, business closure and in the casinos taking more out of the community than they contribute to it. The results suggest that, on average, casinos are perceived to be a positive catalyst for economic and tourism development. However, geographical proximity to the casino, demographic characteristics, and the structure of the industry are all important determinants in the creation of these perceptions.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa -- Sioux City

United States -- Missouri -- St. Joseph

United States -- Missouri -- St. Louis

United States -- Missouri -- St. Louis County

United States -- Illinois -- Alton

United States -- Illinois -- Peoria

United States -- Illinois -- East Peoria

United States -- Mississippi -- Biloxi

**Years Impacts Examined:** 1999



**Impacts:** Social: Increased Positive Attitudes (majority of residents perceive casinos as a catalyst to economic development and do not perceive the closure of existing businesses to be a result of the legalization of casino gambling).

321. Nichols, M., Stitt, B. G. and Giacomassi, D. (2002). Community assessment of the effects of casinos on quality of life. *Social Indicators Research*, 57(3), 229-262.

*Recent attention has focused upon the social and economic impact of legalized gambling, particularly casino gambling. Though considerable attention has been paid to the effects on individuals in such areas as problem gambling, less attention has been given to the effect casino gambling has on citizens' day-to-day life. In particular, how does the introduction of casino gambling affect their quality of life? This paper explores this issue utilizing multiple indicators gathered as part of an in depth study of the effects of casino gambling on crime and quality of life in eight new casino jurisdictions.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa -- Sioux City

United States -- Missouri -- St. Joseph

United States -- Missouri -- St. Louis

United States -- Missouri -- St. Louis County

United States -- Illinois -- Alton

United States -- Illinois -- Peoria

United States -- Illinois -- East Peoria

United States -- Mississippi -- Biloxi

**Years Impacts Examined:** 1998-1999

**Impacts:** Social: No Impact on Subjective Well Being (largely left the quality of life for the average citizen unchanged; but there are a significant number of respondents who did perceive differences in each of the quality of life indicators)

322. Nichols, M., W. , Stitt, B. G. and Giacomassi, D. (2004). Changes in suicide and divorce in new casino jurisdictions. *Journal of Gambling Studies*, 20(4), 391-404.

*Using county-level data, this study examines the impact that the introduction of casino gambling has on suicide and divorce. Eight communities that adopted casino gambling between 1991 and 1994 are compared with a matched set of control counties, jurisdictions that are economically and demographically similar to the casino counties. Suicide rates are not statistically different between casino and control communities. Divorce rates are lower in three casinos counties, higher in one, and not statistically different in four. Overall, the results suggest no widespread, statistically significant increase in either suicide or divorce. Possible explanations for the results are provided.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1991-1994

**Impacts:** Social: No Impact on Problem Gambling and Related Indices (suicide rates are not statistically different between casino and control communities. Divorce rates are lower in three casinos counties, higher in one, and not

statistically different in four. Overall, the results suggest no widespread, statistically significant increase in either suicide or divorce.)

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323. Nichols, M. W., Stitt, B. G. and Giacomassi, D. (2000). Casino gambling and bankruptcy in new United States casino jurisdictions. *The Journal of Socioeconomics*, 29(3), 247-261.

*Using quarterly data on personal consumer bankruptcy for 1989:Q4 through 1998:Q1, this study examines the impact that the introduction of casino gambling has on per capita personal bankruptcy filings. Eight jurisdictions that have recently adopted gambling are compared with a set of matching control jurisdictions, communities without casinos that are economically and demographically similar to the eight communities. The results reveal that casino gambling is associated with an increase in personal bankruptcy in seven of the eight communities. In five of the seven the increase is statistically significant. However, an increase is not universal and in one community, Harrison County, Mississippi (Biloxi), bankruptcy per capita significantly decreased. It is speculated that this decrease is due to the features of both the community and the casino industry in Biloxi. Finally, the most significant changes in bankruptcy occur among Chapter 13, as opposed to Chapter 7, filings. This suggests that a growing portion of insolvents are creating repayment plans for their debts. Policy implications of the findings are discussed.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa -- Sioux City

United States -- Missouri -- St. Joseph

United States -- Missouri -- St. Louis

United States -- Missouri -- St. Louis County

United States -- Illinois -- Alton

United States -- Illinois -- Peoria

United States -- Illinois -- East Peoria

United States -- Mississippi -- Biloxi

**Years Impacts Examined:** 1989-1998

**Impacts:** Social: Increased Problem Gambling and Related Indices (bankruptcy rates increased in seven of the eight communities and decreased in one. Standard two sample t statistics revealed that the increase was statistically significant in five of the seven communities)

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324. Ninokawa, C. (2002). *The social impacts of Indian gaming in California*. United States -- California: California State University, Fullerton. M.A.

*Prior to the 1980's, many California Indians lived on reservations that were characterized by poverty, unemployment, lack of sufficient medical care, and inadequate housing. In 1987, a Supreme Court decision allowed for the continuation of gambling on sovereign Indian land. Tribes throughout California built casinos that have provided revenue to fund social services and reduce poverty on reservations. Despite the economic benefits of Indian gaming, some Californians were initially opposed to increased gambling in the state. Many California citizens disapproved of the transformation of reservations into tourist destinations. Others were confused by the highly publicized political battles between tribes and state law makers over gaming issues. A survey reveals that most Californians are now fairly well informed about the status of Indian gaming in the state. In addition, case studies highlight the successful use of gaming profits by three California tribes to improve social conditions, increase public safety, and preserve cultural heritage.*

**Type:** Original Research

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- California

**Years Impacts Examined:** 2002

**Impacts:** Social: Increase in Employment (decrease in unemployment); Increased Positive Attitudes (generally positive); Increased Public Health (improved health care, education, housing, etc.)

325. Nuffield, J. and Hann, R. G. (2000). *Charity casino impact study: Report of the pre-opening survey in three communities*. Toronto: Ontario Substance Abuse Bureau Ministry of Health and Long-Term Care.

*In the spring of 1998, the Government of Ontario announced plans to create four new "charity casinos" in selected locations across the province where a community referendum had supported this initiative: Sault Ste. Marie, Brantford, Point Edward and Thunder Bay. Smaller than the existing "commercial casinos" at Windsor and Niagara Falls, and with a lower maximum number of table games and slot machines, the charity casinos were designed to replace the roving "Monte Carlo" casinos which had operated in various locations throughout the province and raised funds for participating charitable organizations. The Charity Casino Impact Study is designed to monitor the social and economic effects of introducing these four new charity casinos. (In addition, the Study will examine the effects of the introduction of 450 slot machines into Hiawatha Horse Park in Sarnia, which is adjacent to the Point Edward site, since it was recognized that it would be impossible to separate the effects of the Point Edward casino from those of the Hiawatha expansion.) This Study, funded by the provincial Ministry of Health Substance Abuse Bureau, will track data on a wide range of socio-economic conditions in the four communities, obtain opinion and impressions from a wide range of community members, and facilitate community discussions of the opportunities and challenges created by the new charity casinos. The basic design of the study is a comparison over time of the trends in social and economic factors in the communities before and after the arrival of the new gaming opportunities embodied in the new charity casinos (and slot machines at Hiawatha Horse Park). The study draws on both existing data on social and economic factors, and new information created specifically for the research.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Horse Racing -- Racinos; Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Ontario -- Sault Ste. Marie

Canada -- Ontario -- Brantford

Canada -- Ontario -- Point Edward

Canada -- Ontario -- Thunder Bay

Canada -- Ontario -- Sarnia

Canada -- Ontario -- Gananoque

**Years Impacts Examined:** 2000-2004

**Impacts:** Economic: Changes in Business Revenue (divert income and savings from other saving/spending within the local economy; only modest positive impacts on local businesses); Increased Public Services (smaller charities losing revenues; larger ones may be benefiting; grants in the form of a % of gross slot machines revenues)

Social: Increased Problem Gambling and Related Indices (slight increase in serious problem gamblers after casino openings); Increased Employment

326. O'Neil, M., Chandler, N., & SA Centre for Economic Studies. (2009). *Social impacts of gambling: A comparative study*. Adelaide, South Australia.

*The South Australian Independent Gambling Authority (IGA) commissioned the South Australian Centre for Economic Studies (SACES) to undertake this study of the social impacts of gambling. As stated in the Terms of Reference, this two-stage report "firstly describes the definitions and methodologies used by the Productivity*

*Commission and regulatory bodies in Australia and New Zealand in relation to measuring the social impacts of gambling, and secondly, critiques those methodologies and definitions”.*

**Type:** Methodological Issues; Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

327. O’Neil, M., Whetton, S., Neal, P., Dolman, B., Dolman, M. and Kosturjak, A. (2005). *Community impacts of electronic gaming machine gambling (Part A / Part B)*. Adelaide, South Australia: SA Centre for Economic Studies.

*This report, Community Impacts of Electronic Gaming Machine Gambling originates from the 2002-03 Research Plan and its scope was broadened in the 2003-04 Research Plan of the Gambling Research Panel. The focus of the research project is on identifying the community impact of electronic gaming machine gambling by comparing regions in Victoria with similar areas in Western Australia where there are no EGMs outside of Burswood Casino. The researchers undertook consultations with local community leaders in business and local government, and conducted interviews, focus groups and/or surveys with local residents and stakeholders.*

#### **EXCELLENT QUALITY**

**Type:** Original Research; Secondary Analysis; Methodological Issues

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Australia – Victoria; Australia -- Western Australia

**Years Impacts Examined:** 1983-2003

**Impacts:** Economic: Decrease in Business Revenue (expenditure may also have been drawn away from the café and restaurant sector)

Social: Changed Employment (a clear rise in employment for Victoria during the period in which EGMs were rapidly introduced into venues; introduction did not lead to a permanently higher level of employment; job intensity associated with gambling is low; legalization of EGMs may reflect a shift of employment between sectors rather than increasing employment overall); Increased Negative Attitudes (Victorians less satisfied with gambling than Western Australian [no EGMs outside of casino]); Increased Problem Gambling and Related Indices (prevalence rate of problem gambling in Victoria is three times that of Western Australia; more problems related to EGMs in Victoria; 1994 to 1999 was the period of high growth in the number of pawnbrokers and second-hand dealers in the Greater Melbourne area; however, suicide rates similar in Western Australia and Victoria.)

328. Oddo, A. R. (1997). The economics and ethics of casino gambling. *Review of Business*, 18(3), 4-8.

*Casino gambling has been a part of the Las Vegas and Atlantic City communities for many years and is now being promoted as a means of economic development in other areas, including Niagara Falls, New York. The economic impact and ethical implications of casino gambling are investigated. The experiences of Las Vegas, Atlantic City, and other cities are examined as possible lessons for Niagara Falls and any other areas considering casino gambling. There has been no significant urban development in Atlantic City, which was a primary goal of legalized gambling in New Jersey. Considering the added social costs of casino gambling, it appears that the costs outweigh the benefits, and casino gambling is not a viable option for economic development.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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329. Optimal Solutions Group (2004). *The economic and social impacts of racetrack video lottery terminals on the City of Baltimore and Prince George's County*. Baltimore, MD: Presidents' RoundTable, Inc. & Greater Prince George's Business Roundtable, Inc.

*In recognition of the potentially enormous consequences of VLTs at three Central Maryland racetracks, The Presidents' RoundTable, Inc. and Greater Prince George's Business Roundtable, Inc. commissioned this study to analyze the probable economic and social impacts of expanded gaming on the citizens and businesses of Baltimore City and Prince George's County. The goal of this study is to inform political decision-makers and community stakeholders for the 2004 Maryland legislative session and beyond.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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330. Pahor, M. (2006). *The impact of gambling on social and economic environment in Nova Gorica*. Nova Gorica, Slovenia: School of Advanced Social Studies in Nova Gorica.

*The present paper describes the first comprehensive study of gambling impacts in Slovenia. It is based on the Grinols (2004) theoretical ideas and classification of social costs and benefits of gambling and uses a similar approach as the National Gambling Impact Study Commission (1999) in the USA. The impact of gambling was assessed by using both primary and secondary data. The primary data consisted of 30 in-depth interviews with local opinion makers and a quantitative survey on 250 inhabitants of Nova Gorica. Secondary data were obtained from different sources – statistical office, statistical yearbooks and the police. The results are limited to the Municipality of Nova Gorica and are not meant as a study of the total impact of gambling. The study was done in a very conservative manner, so it is possible that it underestimates the benefits and overestimates the costs. Nevertheless the results show that the Municipality of Nova Gorica has much more benefits from gambling than costs. This introduction is followed by an overview of theoretical and empirical findings about the impact of gambling. After presenting the methodology, the benefits and the costs of gambling in the Municipality of Nova Gorica are presented. We conclude with some recommendations.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** Slovenia -- Nova Gorica

**Years Impacts Examined:** 2005

**Impacts:** N/A

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331. Pantuosco, L., Seyfried, W. and Stonebraker, R. (2007). The impact of lotteries on state education

expenditures: Does earmarking matter? *Review of Regional Studies*, 37(2), 169-185.

*In this paper, we estimate the impact of earmarking lottery revenue to education as opposed to filtering lottery revenue through a state's general fund. A unique facet of this investigation is the comparison of states with lottery revenue earmarked for spending on K-12 education and states with lotteries for general funds. This approach enables us to investigate the effect of state lottery revenues on education and other budgetary components in a more controlled environment by mitigating lottery preference differences across states. Consistent with previous research, we find that earmarking lottery proceeds for K-12 education has little or no impact on actual state K-12 funding. We also find that lottery revenue does seem to increase K-12 funding in states that deposit the revenues into their general funds.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries

**Location(s):** United States

**Years Impacts Examined:** 1984-2001

**Impacts:** Economic: Increased Public Services (increased lottery revenues seem less likely to generate increased K-12 spending in "lottery-for-education" states than in "lottery-for-general-fund" states; Earmarking funds for education may serve to make lotteries more politically viable but has no practical impact on budget allocations.)

332. Papoff, K. and Norris, J. (2009). Instant ticket purchasing by Ontario baby boomers: Increasing risk for problem gamblers. *Journal of Gambling Studies*, 25(2), 185-199.

*Instant ticket purchase gambling (ITPG) is pervasive in Ontario and has features that mimic slot machine play. Previous researchers have reported that ITPG is one preferred activity for at-risk/problem gamblers. In the general Canadian population, rate of participation in ITPG is second only to lottery ticket gambling. Both are particularly favored by youth and seniors. The next cohort of seniors will be Canada's baby boomers, one-third of whom live in Ontario. Secondary analysis of Statistics Canada data revealed that adults in this cohort who buy instant gambling tickets (N=1781) are significantly different from the complete group of their age peers (N=4266) in number of activities pursued and frequency of involvement. At-risk/problem gambling prevalence was 10.2% amongst Ontario baby boomers who participate in instant ticket gambling, significantly higher than the 6.7% found amongst the total group of baby boom gamblers. For those who reported experiencing one or more of the Canadian Problem Gambling Index indicators for problem gambling (N=237), 73% were buying instant tickets. Future research should consider cohort effects and explore combinations of preferred gambling activities that may increase risk for problem gambling. Social policy recommendations include the use of all ITPG venues as key locations for promoting awareness of problem gambling treatment services.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Instant Win Tickets

**Location(s):** Canada -- Ontario

**Years Impacts Examined:** 2002

**Impacts:** Social: Problem Gambling and Related Indices (At-risk/problem gambling prevalence was 10.2% amongst Ontario baby boomers who participate in instant ticket gambling, significantly higher than the 6.7% found amongst the total group of baby boom gamblers.)

333. Park, M. and P. A. Stokowski. Casino Gaming and Crime: Comparisons among Gaming Counties and Other Tourism Places. *Journal of Travel Research*.

*Casino gaming has spread across America, but its impacts remain unclear. This study extends research about crime impacts of gaming development in rural communities, addressing whether tourism growth leads to an increase in crime, or whether crime is an inherent by-product of gaming tourism. Using a sample of rural Colorado counties, this study compared crime effects in casino gaming counties, ski counties, natural resources access counties, and cultural tourist attraction counties. In contrast to conventional wisdom, this study found that ski counties had a significantly higher property crime rate than did gaming, natural resource access, and cultural tourist attraction counties. Results also suggest the presence of interaction effects between tourism types and growth levels, affecting crime rates. These results provide valuable information to communities considering tourism alternatives for economic development, and they also inform public policy.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States - Colorado

**Years Impacts Examined:** 1976 - 1997

**Impacts:** Social: Crime (this study found that ski counties had a significantly higher property crime rate than did gambling, natural resource access, and cultural tourist attraction counties. Results also suggest the presence of interaction effects between tourism types and growth levels, affecting crime rates.)

334. Parliament of Tasmania Legislative Council Select Committee (2002). *Impacts of gaming machines*. Hobart, Australia: Parliament of Tasmania

*On Thursday, 4 October 2001 the Legislative Council resolved that a Select Committee of Inquiry be appointed "to inquire into and report upon: (1) the immediate and long term social and economic impacts upon the community of the expanded operation of poker machines in hotels and clubs; (2) the adequacy of current funding and support services for gaming machine addicted persons, families and communities; (3) the role and membership of the Tasmanian Gaming Commission; (4) the role and application of the Community Support Levy; (5) the degree to which undertakings given during the debate on the Gaming Control Bill 1993 have been adhered to; (6) the degree to which the Parties have complied with the obligations contained within the Gaming Control Bill 1993 and attached Deed; and (7) other matters incidental thereto".*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

335. Patrick, K. and A. H. Carol (2010). Casino gambling and workplace fraud: a cautionary tale for managers. *Management Research Review* 33(3): 224-239.

*Purpose – The purpose of this paper is to examine notable instances of fraud that have occurred in Southeastern Connecticut and surrounding areas since the development of two large casinos in that region. Design/methodology/approach – Fraud case histories and prosecutions in which the gambling actions of individuals provided the incentive or pressure for the fraud to occur are examined. Findings – A number of employees who work in business and government have stolen significant sums of money to support gambling activities. The cases are linked to the growth of casino gambling and an accompanying increase in pathological and problem gambling; which research indicates doubles within 50 miles of a casino. Consistent with prior research, most of the thefts were not discovered by auditors or management in a timely manner. Research limitations/implications – This paper*

*examines the impact of fraud due to casino gambling in one region, further research will examine other regions. One limitation in the research process is the reluctance of businesses to report instances of fraud, thus resulting in an underreporting of the extent of the problem. Practical implications – The paper recommends actions to be taken by managers in casino areas that can prevent employees from committing such fraud. These actions include the establishment of internal audit procedures, use of an external auditor for specific internal control tasks, upper management review of certain key business documents, increased accountability for organizational check registers, improved control for incoming cash receipts, and fraud awareness training. Originality/value – Managers in casino regions that become aware of the risks and employ the recommended measures may prevent and minimize business fraud.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States - Connecticut

**Years Impacts Examined:**

**Impacts:** Economic: Economic Impacts Related to Problem Gambling (various examples of fraud).

Social: Crime.

336. Peacock, T. D., Day, P. A. and Peacock, R. B. (1999). At what cost? The social impact of American Indian gaming. *Journal of Health & Social Policy*, 10(4), 23-34.

*American Indian gaming has been called the "new buffalo." It has the potential to greatly influence cultural traditions on American Indian reservations. This study looks at the social impact that American Indian gaming is having on one reservation in northern Minnesota. Tribal members share strong feelings, both positive and negative, about the issue. Concerns about gaming include an increase in gambling abuse and addiction; a lack of appropriate child care; and concern that gaming is replacing traditional social activities. Some express concern that American Indian values are being replaced by materialism. Supporters of gaming point out that gaming provides tribal members with an opportunity to learn job skills and have gainful employment. Implications for social policy are given.*

**Type:** Original Research

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- Minnesota

**Years Impacts Examined:** 1999?

**Impacts:** Social: Changed Values (sense from most informants that the presence of casino gaming was having yet undetermined effects on traditional tribal culture - values, beliefs, ways of being - that these effects were most probably negative and would become apparent in the near future.)

337. Pearce, J., Mason, K., Hiscock, R. and Day, P. (2008). A national study of neighbourhood access to gambling opportunities and individual gambling behaviour. *Journal of Epidemiology and Community Health*, 62(10), 862-868.

*To investigate associations between neighbourhood accessibility to gambling outlets (non-casino gaming machine locations, sports betting venues and casinos) and individual gambling behaviour in New Zealand. A Geographical Information Systems (GIS) measure of neighbourhood access to gambling venues. Two-level logistic regression models were fitted to examine the effects of neighbourhood access on individual gambling behaviour after controlling for potential individual- and neighbourhood-level confounding factors. 38,350 neighbourhoods across New Zealand. 12,529 respondents of the 2002/03 New Zealand Health Survey. Compared with those living in the*



quartile of neighbourhoods with the furthest access to a gambling venue, residents living in the quartile of neighbourhoods with the closest access were more likely (adjusted for age, sex, socio-economic status at the individual-level and deprivation, urban/rural status at the neighbourhood-level) to be a gambler (OR 1.60, 95% CI 1.20 to 2.15) or problem gambler (OR 2.70, 95% CI 1.03 to 7.05). When examined independently, neighbourhood access to venues with non-casino gaming machines (gambling: OR 1.67, 95% CI 1.28 to 2.18; problem gambling: OR 2.71, 95% CI 1.45 to 5.07) and sports betting venues (gambling: OR 1.67, 95% CI 1.28 to 2.18; problem gambling: OR 2.71, 95% CI 1.45 to 5.07) were similarly related. Neighbourhood access to opportunities for gambling is related to gambling and problem gambling behaviour, and contributes substantially to neighbourhood inequalities in gambling over and above-individual level characteristics.

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Electronic Gambling Machines (EGMs); Sports Betting; Casinos

**Location(s):** New Zealand

**Years Impacts Examined:** 2002-2003

**Impacts:** Social: Increased Problem Gambling and Related Indices (evidence that neighbourhood access to gambling opportunities affected problem gambling)

338. Perdue, R. R., Long, P. T. and Kang, Y. S. (1995). Resident support for gambling as a development strategy. *Journal of Travel Research*, 34(2), 3-11.

*The purpose of this research was to examine resident support for gambling as a function of the perceived impacts of gambling and the quality of contact between residents and gamblers, controlling for levels of personal benefits and the perceived future of the community. Key positive impacts of gambling identified in this research included the number of jobs available for local residents, recreational and cultural opportunities, and the preservation of historical buildings and structures. Negative impacts included increases in the cost of living, traffic congestion, driving hazards, crime, and noise levels. A regression model was estimated of resident support for gambling development as a function of personal benefits, perceived future of the community, gambling impacts, and quality of contact with gambling.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Colorado -- Cripple Creek

United States -- Colorado -- Black Hawk

United States -- Colorado -- Central City

United States -- South Dakota -- Deadwood

**Years Impacts Examined:** 1992

**Impacts:** N/A

339. Perdue, R. R., Long, P. T. and Kang, Y. S. (1999). Boomtown tourism and resident quality of life: The marketing of gaming to host community residents. *Journal of Business Research*, 44(3), 165-177.

*The purpose of this research was to compare the tourism development cycle and social disruption theories for assessing the impact of gaming tourism on quality of life in host communities. Various tourism development cycle theories, all generally based on social carrying capacity, postulate an initial positive change in QOL during the early stages of gaming's development followed by negative change after the community has reached its "carrying capacity" or "level of acceptable change." Based primarily in the rural sociology "boomtown" literature, the social disruption theory postulates essentially an opposite effect - an initial negative change in the quality of life as the*

*community experiences the transitional stress of rapid casino development followed by positive change as the community and its residents adapt to its new situation. The study results support the social disruption theory. Thus, rate of growth is a key variable to be incorporated into the tourism impact literature. However, in concert with social exchange theory, these results are mediated by individual resident attitudes concerning the desirability of and personal benefits from gaming. The study and its conclusions are framed within the context of public relations strategy for casino businesses.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Colorado -- Grand Lake

United States -- Colorado -- Cripple Creek

United States -- Colorado -- Black Hawk

United States -- Colorado -- Central City

United States -- South Dakota -- Deadwood

**Years Impacts Examined:** 1999?

**Impacts:** N/A

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340. Perez, T. E. (2007). *Slot machines and the racing industry: A review of existing data in Maryland and neighboring states*. Baltimore, MD: Maryland Department of Labor, Licensing and Regulation.

*This report presents an overview of the impact of slot machines on the racing industries in Pennsylvania, West Virginia and Delaware. During the past month, I visited slots venues at racetracks in those states. My staff and I have spoken with officials at these facilities, toured the racetracks, the slots venues, and trolled parking lots examining license tags in an unscientific effort to validate the information we received regarding who was frequenting these facilities.*

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs); Horse Racing; Racinos

**Location(s):** United States -- Delaware

United States -- West Virginia

United States -- Pennsylvania

**Years Impacts Examined:** 1995-2006

**Impacts:** Economic: Increased Business Revenue (Slots revenue is being used to subsidize the industries and encourage breeding, as well as to fund other priorities. This business model is working quite well in Delaware and West Virginia)

Social: No Impact on Crime

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341. Perfetto, R. and Woodside, A. (2009). Extremely frequent behavior in consumer research: Theory and empirical evidence for chronic casino gambling. *Journal of Gambling Studies*, 25(3), 297-316.

*The present study informs understanding of customer segmentation strategies by extending Twedt's heavy-half propositions to include a segment of users that represent less than 2% of all households—consumers demonstrating extremely frequent behavior (EFB). Extremely frequent behavior (EFB) theory provides testable propositions relating to the observation that few (2%) consumers in many product and service categories constitute more than 25% of the frequency of product or service use. Using casino gambling as an example for testing EFB theory, an analysis of national survey data shows that extremely frequent casino gamblers do exist and that less than 2% of all casino gamblers are responsible for nearly 25% of all casino gambling usage. Approximately 14% of*

*extremely frequent casino users have very low-household income, suggesting somewhat paradoxical consumption patterns (where do very low-income users find the money to gamble so frequently?). Understanding the differences light, heavy, and extreme users and non-users can help marketers and policymakers identify and exploit “blue ocean” opportunities (Kim and Mauborgne, Blue ocean strategy, Harvard Business School Press, Boston, 2005), for example, creating effective strategies to convert extreme users into non-users or non-users into new users.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1993-1998

**Impacts:** N/A

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342. Persky, J. (1995). Impact studies, cost-benefit analysis and casinos. *Journal of Gambling Studies*, 11(4), 349-360.

*The simplest forms of impact analysis treat a prospective casino facility as an entirely new source of demand in a region, while completely ignoring the character of supply responses. Such approaches cannot be used to estimate the net benefits of a casino. On the demand side they fail to consider the displacement of other local goods and services, while on the supply side they ignore the fact that most workers have real opportunity costs in the form of alternative employments either inside or outside the region. While various studies have attempted to address the displacement issue, virtually none have looked seriously at the opportunity cost of labor. Evidence suggests that such costs are large. An estimate presented here for Chicago sets these costs at 45% of casino and related labor income.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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343. Phillips, D. P., Welty, W. R. and Smith, M. M. (1997). Evaluated suicide levels associated with legalized gambling. *Suicide and Life Threatening Behavior*, 27(4), 373-378.

*Investigated whether gamblers or those associated with them are prone to suicide and whether gaming communities experience atypically high suicide rates. Data was gathered using the computerized mortality data from the US National Center for Health Statistics, 1969-1991. The geographical areas defined as gambling settings were Las Vegas, Reno, and Atlantic City. Results show that Las Vegas has the highest levels of suicide in the nation, both for residents of Las Vegas and for visitors to that setting. In general, visitors to and residents of major gaming communities experience significantly elevated suicide levels. In Atlantic City, abnormally high suicide levels for visitors and residents appeared only after gambling casinos were opened. The findings do not seem to result merely because gaming settings attract suicidal individuals.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Nevada -- Las Vegas

United States -- Nevada -- Reno

United States -- New Jersey -- Atlantic City

**Years Impacts Examined:** 1969-1991

**Impacts:** Social: Increased Problem Gambling and Related Indices (In general, visitors to and residents of major gaming communities experience significantly elevated suicide levels. In Atlantic City, abnormally high suicide levels for visitors and residents appeared only after gambling casinos were opened. Findings suggest but do not prove that gamblers experience abnormally high risks of suicide.)

344. Phipps, A. G. (2004). Crime and disorder, and house sales and prices around the casino sites in Windsor, Ontario, Canada. *Canadian Geographer*, 48(4), 403-432.

*This study is an analysis of the impact of the opening or closure of a new urban casino on crime and disorder, and house sales and prices in its neighbourhood. The two sets of time-series data were the calls to the police about three types of offences and the house sales through the Multiple Listing Service in two neighbourhoods near the casinos in Windsor, Ontario, Canada. Temporally, the weekly numbers of offences and the mean monthly house prices were oscillating almost randomly around their respective declining or stationary long-term averages with no impulse from when a casino either opened or closed. Geographically, only two types of offences increased in number nearer to a casino site, but their respective distance decays neither moderated nor steepened after a casino had closed or opened. Even so, the conclusion is premature that the open or closed casinos have had benign effects on offences and house sales in the neighbourhoods.*

**GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** Canada -- Ontario -- Windsor

**Years Impacts Examined:** 1993-2001 (Crime); 1981-2001 (Property)

**Impacts:** Economic: No Impact on Property Value (median monthly house prices with no effect from casino opening / closing; but premature to assume benign effect.)

Social: No Impact on Crime (only two types of offenses increased in number nearer to a casino site, but respective distance decays neither moderated nor steepened after a casino had closed or opened; but premature to assume benign effect.)

345. Pinge, I. (2000). *The impact of electronic gaming machines on retail trade in Victoria – the first four years, 1992-96*. Bendigo, Australia: La Trobe University, Bendigo.

*This paper sets out to examine the emergence of electronic gaming in Victoria and its impact on retail trade during the first four years of operation. A multiple regression model for retail trade involving gaming revenue, employment and seasonal variation was developed. Initial findings suggest that electronic gaming has been negatively associated with only a small number of retail industry groups and subgroups. For total retail trade and for a majority of retail sectors however no negative links were detected with some sectors (including hotels and licenced clubs) showed positive relationships.*

**GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- Victoria

**Years Impacts Examined:** 1986-1996

**Impacts:** Economic: Changes in Business Revenue (introduction of electronic gaming machines have had a complex

and diverse impact on the retail sector overall. Over the ten years under review there were clear underlying trends in retail trade reflecting lifestyle changes. Rather than disrupting these patterns, gaming appears to have embedded itself into spending patterns which were already moving away from spending on large ticket items such as furniture, floor coverings, domestic hardware, housewares, clothing and footwear. In vogue was spending on cafes and restaurants, takeaway foods, pharmaceuticals, cosmetics and supermarkets.)

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346. Pinge, I. (2008). *Electronic gaming machines in Bendigo 2008 - assessing their economic impact - Prepared for the City of Greater Bendigo*. Bendigo, Australia: Jimbrada Pty Ltd.

*The study sets out to isolate the electronic gambling sector from food and beverage sales and club activities and assess the net economic impact of electronic gaming machines (EGMs) on the regional economy of Bendigo. This approach assumes that food, beverage and club activities all occurred prior to the introduction of EGMs and would continue in the unlikely event of the removal or drastic cutback of the electronic gambling sector. It follows an earlier study (Pinge 2000) that examined similar issues through regional economic modelling. Much more attention is given in this study to the underlying features of the electronic gambling industry sector which determine its relatively weaker performance as an industry sector. A number of surveys of gamblers in Victoria, including EGM gamblers, have been carried out since the last study and the important information they have provided has been incorporated into the study.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- Victoria -- Bendigo

**Years Impacts Examined:** 2006-2007

**Impacts:** Economic: Decrease in Business Revenue (sucks up spending from higher performing industry sectors, costing jobs and output to the state economy and even more in the Bendigo economy once high levels of regional leakages are taken into account.); Costs Related to Problem Gambling (Measurable social costs have been estimated to be a further \$37.490 million and a total annual loss of \$58.032 million)

Social: Decreased Employment (EGM industry has cost Bendigo an estimated \$20.542 million in output and 207 jobs as a consequence of a change in spending behaviour.)

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347. Pion Economics (2005). *Casinos in England's Northwest: An assessment of market demand: Final report*. Salford, England.

*This report provides the findings and analysis of the Pion Economics team undertaking a study of casino market demand in North West England. The study was commissioned by NWDA, jointly steered by NWRA and GONW, and shows that the North West has capacity to sustain a number of 'regional' casino structures. The study does not address social impacts connected with the development of casino facilities, but it recognises that they remain an underlying consideration to be addressed in evaluating casino operations.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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348. Pirog-Good, M. and Mikesell, J. L. (1995). Longitudinal evidence of the changing socio-economic profile of a state lottery market. *Policy Studies Journal*, 23(3), 451-465.

*This longitudinal study of Indiana lottery expenditures tracks that market from a time when all play was in games offered by other states until the state offered a full portfolio of games. Both the socio-economic characteristics of players and the nature of their play have changed. Participation doubled when the Indiana games began, and it continues to increase, albeit more slowly. Lottery play is regressive, and has become increasingly regressive over time. An increasing proportion of lottery revenues comes from low-income players and heavy bettors, although small bets are still the norm. While college graduates play the lottery less than do other individuals, the initial large gap in play rates for these two groups is diminishing as college graduates increase their participation in the lottery. Similarly, women and individuals between the ages of 44 and 65 are continuing to increase their participation in lotteries. Patterns associated with increased regressivity, with increased play among low-income players, and with higher reliance on heavy bettors, suggest a need for special policy vigilance as the games mature.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries

**Location(s):** United States -- Indiana

**Years Impacts Examined:** 1988;1990; 1992

**Impacts:** Social: Increased Socioeconomic Inequality (the lottery is quite regressive, and this regressivity has increased with time. Among all persons in the lowest income category, total play in 1992 accounted for 1.78% of their annual gross income, and 4.21% of the gross annual income of players only.)

349. Piscitelli, F. and Albanese, J. S. (2000). Do casinos attract criminals? A study at the Canadian-U.S. border. *Journal of Contemporary Criminal Justice*, 16(4), 445-456.

*Examined changes in the number of criminally inadmissible persons who seek admission to Canada from the US due to the opening of Casino Niagara in Niagara Falls, Ontario. Four measures were used to assess the impact of the new casino on cross-border movement of criminals: (1) changes in total bridge crossing before and after the opening of the casino; (2) changes in the total number of criminals denied entry to Canada; (3) changes in the proportion of criminals convicted for crimes related to organized crime; and (4) changes in the proportion of organized crime offenders specifically enroute to the casino. Results show that total border crossings increased by 10%, and that the number of inadmissible entrants increased from .2% to 1.5% in the initial year that the casino was open. Prior to the opening of Casino Niagara 80% of denial-of-entry cases involved organized crime offenses; this rate dropped to 60% after the casino opened.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** Canada -- Ontario -- Niagara Falls Region

**Years Impacts Examined:** 1995-1998

**Impacts:** Social: Increased Crime (the rate of criminally inadmissible persons attempting to enter Canada from the United States, although low, increased after the opening of Casino Niagara. The rate of denial of entry increased more dramatically a full year after the casino opened, but the reasons for this second increase are difficult to state with certainty; there was a drop in the proportion of those found to be criminally inadmissible for organized crime-related offenses since the opening of the casino).

350. Pizam, A. and Pokela, J. (1985). The perceived impacts of casino gambling on a community. *Annals of Tourism Research*, 12(2), 147-165.

*Proposals have been made to legalize a single hotel casino in each of the towns of Adams and Hull, Massachusetts. A telephone survey of a systematic sample of 400 respondents in the Adams and Hull area was conducted in order to assess the perceived impacts of a hotel-casino in each of these locations. The findings show little consensus as to the positive impacts, but much greater agreement over the negative impacts that a hotel casino might have in the respondents' towns. The major factor in predicting respondents' attitudes toward legalization was found to be their perception of the impact a hotel-casino would have on the character of their town. Other major factors were the impact of the hotel-casino on crimes involving drugs and prostitution, the effectiveness of the State government at regulating casino gambling, the respondent's age, the impact of the hotel-casino on the overall standard of living, and the impact of the hotel-casino on jobs for local residents.*

**Type:** Scoping Study; Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

351. PolicyAnalytics LLC (2006). *A benefit-cost analysis of Indiana's riverboat casinos for FY 2005: A report to the Indiana Legislative Council and the Indiana Gaming Commission*. Indianapolis, IN: PolicyAnalytics LLC.

*The Indiana Legislative Council, in June of 2005, asked the Indiana Gaming Commission to study the impact of gaming on Indiana citizens and communities. To carry out this request the Gaming Commission hired Policy Analytics, LLC to analyze the benefits and costs to Indiana citizens and communities of the current system of riverboat casinos. We utilized a benefit-cost approach, comparing the current Indiana policy to an alternative, hypothetical policy in which Indiana does not have any riverboat casinos for fiscal year 2005. In order to measure the incremental costs and benefits for Indiana under its current policy, we assume that other factors (such as the availability of gaming in other states and the availability of lottery and charitable gaming in Indiana) are held constant.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States -- Indiana

**Years Impacts Examined:** 2005

**Impacts:** Economic: Increased Government Revenue (estimated net increase in Indiana's state and local taxes due to Indiana's regulatory and tax policies for fiscal year 2005 is \$763.23 million); Increased Regulatory Costs (Indiana spent \$3.34 million for casino regulation in fiscal year 2005); Increased Costs Related to Problem Gambling (estimated 774 bankruptcies attributed to presence of casinos for year 2005. Cost of approximating \$1.21 million for the year; tangible cost to Indiana residents from additional crime in fiscal year 2005 is estimated to be \$52.14 million; estimated "other" social costs to Indiana for fiscal year 2005 are between \$19.02 million and \$41.87 million in additional costs relating from job loss, unemployment, health costs, mental health costs, gambling treatment, and divorce.)

Social: Increased Problem Gambling and Related Indices (study estimates that an additional 6,178 (0.13% of Indiana Adults) problem gamblers and an additional 12,356 (0.26% of Indiana Adults) pathological gamblers can be attributed to the introduction of riverboat casinos); Increased Consumer Surplus (gain to Indiana citizens from the proximity to the recreation offered at casinos in the state is estimated at \$52.62 million).

352. Popp, A. V. and Stehwien, C. (2002). Indian casino gambling and state revenue: Some further evidence. *Public Finance Review*, 30(4), 320-330.

*The economic impact of New Mexico's Indian casinos on local and neighboring counties is researched. Findings indicate that reservations lower state, county and municipal taxable gross receipts, and that opening Indian casinos causes government revenue to drop even further.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- New Mexico

**Years Impacts Examined:** 1990-1997

**Impacts:** Economic: Decreased Government Revenue (opening of the first casino in a county imparts a negative, if small, effect on the total taxable gross receipts generated in that county. At the same time, it affects the neighboring counties by lowering the total taxable gross receipts generated in that county by 1.3%. The second casino opening in a county significantly impacts taxable gross receipts, decreasing them by 6.2%.)

353. Porter Dillon Limited and Sterling Research Inc. (1999). *Socioeconomic impact of video lottery terminals: Final report*. Halifax, NS: Standing Committee on Community Services.

*The objective of the report was "to assess the social and economic implications of VLT gaming on Nova Scotians to assist the all party committee [i.e., the Standing Committee on Community Services] in determining if, after considering the positive and negative impacts, VLT gaming in particular exceeds the limits of social acceptability in Nova Scotia."*

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Nova Scotia

**Years Impacts Examined:** 1997-1998

**Impacts:** Economic: Increased Government Revenue (\$80.4 generated for province from VLTs in 1998); Costs Related to Problem Gambling (estimated at \$11,600 / problem gambler or \$74.2M overall... employment cost, lost labour, health treatment, debts, criminal justice, welfare, etc.)

354. Powell, H. C. (2003). *The social impact of riverboat casino gambling: Using objective local indicators to measure changes in the quality of life in a gambling community*. United States -- Texas: Baylor University. Ph.D.

*The gaming industry in the United States has rapidly expanded within the past fifteen years. The main reason for this expansion has been increased tax revenue for the local and state communities to offset declining federal support. Riverboat casinos have become a popular way of maintaining support for social services without raising taxes. However, critics point to social costs that may negatively impact the quality of life in local host communities. Using Louisiana as a state that has introduced riverboat casino gambling during the past decade, objective measures of quality life in gambling and nongambling parishes over time were evaluated. The effects of riverboat casino gambling on the quality of life of residents in host communities were assessed using the key indicators of migration rates, educational attainment, crime rates, income, social service usage, poverty levels, and marriage and divorce rates. Results indicate that while riverboat casino gambling does not negatively impact the overall quality of life, relatively few differences were found between the gambling and nongambling communities after the introduction of riverboat casino gambling. One major finding was the significant decrease in both the total crime*



rate and property crime rate that occurred after riverboat casino gambling was introduced in gambling parishes.

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States -- Louisiana

**Years Impacts Examined:** 1988-2000

**Impacts:** Social: Decrease in Crime (parishes that introduced riverboat gambling experienced decreases in crime significantly greater than those in three comparable nongaming parishes); No Impact on Quality of Life/Public Health/Social Capital (general lack of measurable quality of life outcomes associated with riverboat casinos)

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355. PricewaterhouseCoopers LLP (2006). *Proposed regional casino development – Economic and social impact assessment*: PricewaterhouseCoopers LLP.

*As part of the process of preparing a submission to CAP, Newcastle City Council has engaged PricewaterhouseCoopers LLP to undertake an independent assessment of a range of potential social, economic and regeneration impacts which may be associated with a Regional Casino operation. This assessment includes consideration of potential social risks including problem gambling, risks to children and other vulnerable groups, risks of crime, together with potential social benefits, a market assessment and analysis of potential economic benefits.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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356. Productivity Commission (2010). *Gambling*. Canberra, Australia: Productivity Commission. Feb 26, 2010.

*On 24 November 2008, the Australian Government requested the Productivity Commission to undertake a public inquiry into Australia's gambling industries. The initial completion date was 24 November 2009, but the Government subsequently extended this to 28 February 2010 to enable more time for participants' submissions and the Commission's data gathering. This is a very different report to the one that resulted from the Commission's 1999 review (PC 1999). At that time, there was little independent information and analysis about gambling, and a major role for the Commission was to help fill that gap. The report addressed the considerable deficits in the available data and provided the first systematic national review of the impacts of gambling on the Australian economy and society. However, while the report had many findings of direct relevance to public policy, the terms of reference did not permit the Commission to make formal recommendations.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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357. Przybylski, M. (1998). Does gambling complement the tourism industry? Some empirical evidence of import substitution and demand displacement. *Tourism Economics*, 4(3), 213-231.

*Gambling is intuitively considered as part of the tourism 'package'. This paper empirically assesses this perception in the context of actual casino development in Indiana and simulated impacts of a hypothetical casino in Israel. In both contexts, the sources of demand for gambling, the extent to which these are 'tourist' sources and the question of gambling-generated demand displacing existing tourist demand, are examined. Despite the rather different market and political contexts in Indiana and Israel, the findings on the gambling-tourism relationship and the effect of gambling on local economies, are remarkably consistent. In both cases, gambling is seen to be grounded in import-substitution rather than pure 'export' activity. Additionally, in both cases there is evidence that the introduction of gambling displaces tourist demand. The policy implications of these findings point to the need to differentiate between local and national impacts of gambling and between the local fiscal and local economic development impacts.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Indiana

**Years Impacts Examined:** 1993-1996

**Impacts:** Economic: Decrease in Business Revenue (gambling displaces existing tourist demand even if the casino generates an overall growth in demand; causes a definite and absolute decline in other forms of tourist activity, as seen by the decrease in tourist expenditure on historical and sightseeing activities over the period 1993-1996.)

358. Public Sector Gaming Study Commission (2000). *The Public Sector Gaming Study Commission. Prepared for the National Council of Legislators from Gaming States (NCLGS)*. Tallahassee, FL: Florida Institute of Government, Florida State University.

*The Public Sector Gaming Study Commission was a specially constituted national commission of state and local government leaders to study the social and economic impact of gaming and the role of the state and local governments and their citizens in making public policy regarding to gaming. The National Council of Legislators from Gaming States (NCLGS) commissioned the study. NCLGS is a non-partisan organization of state legislators who chair or are active members of the committees responsible for gaming in their respective state houses across the country. The study was needed for reasons of state sovereignty, state revenue, and state social policy. It was needed now because gaming regulation has historically been the province of the states and because a multi-million dollar study that was conducted by the National Gambling Impact Study Commission (NGISC) had no public sector input.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

359. Rabeau, Y. (2004). *Mise à jour de l'évaluation des retombées économiques des activités de la Société des casinos du Québec (SCQ)*.

*Updated evaluation of the economic impact of the Societe des Casinos du Quebec's Activities. Universite du Quebec a Montreal: Report available from author.*

**Type:** Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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360. Rankine, J. and Haigh, D. (2003). *Social impacts of gambling in Manukau City: A report for Manukau City Council*.

*This report provides evidence of gambling impacts in Manukau City so that the Manukau City Council can develop a Gambling Venue Policy, required six months after the passing of the Gambling Bill currently before Parliament.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** All Gambling

**Location(s):** New Zealand -- Manukau City

**Years Impacts Examined:** 2001; 2003

**Impacts:** Social: Increased Problem Gambling and Related Indices (interviews for this report indicate significant social impacts in Manukau City, particularly in neglect of children, relationship break-up, debt, eviction or housing mortgagee sales, crime and health system costs); Increased Negative Attitudes (Community concern about the social impacts of gambling is high in Manukau City)

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361. Reece, M. (2007). *Economic impacts of casino gambling on rural Michigan communities*. United States -- Michigan: Western Michigan University. Ph.D.

*When considering future casino development, it is important to know whether the magnitude of a casino's economic impact. A way to understand the impact of adding a casino to a rural Michigan community is to study the economic changes during the 6 years surrounding casino's opening. If significant changes occur in population, employment, and commercial, industrial, and residential property values, it may be possible to attribute this change to the introduction of a casino. Township level data is used for an index of annual percentage change, preceding and following an opening. This study tests for movement in the community's economics for 17 casinos. The research found a consistent change is not observed. If community public administrators and leaders are offered a casino, they will need to evaluate the proposal carefully. The often-forecasted economic benefit for communities seems to occur about half the time.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Indian Gaming -- Casinos

**Location(s):** United States -- Michigan

**Years Impacts Examined:** 1980-2006

**Impacts:** Economic: No impact on Property Values

Social: No Impact on Employment (overall labour force and share of population employed relatively constant; no changes to population, labour market or property values attributable to the casino)

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362. Reece, W. S. (2010). Casinos, hotels, and crime. *Contemporary Economic Policy* 28(2): 145(117).

*This paper examines the links among casinos, hotels, and crime using Indiana's counties for 1994-2004. In estimating casinos' impacts, I introduce a measure of casino activity in addition to variables related to the timing of casino opening. I test whether or not the number of hotel rooms affects crime rates. Increased casino activity reduces crime rates except for burglary, where crime rates rise after a lag. Leaving out a measure of casino activity appears to create a serious specification error. Finally, including problem crime data plagued by incomplete reporting affects the estimated impact of casinos on crime. (JEL R11, L83)*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States - Indiana

**Years Impacts Examined:** 1994- 2004

**Impacts:** Social: Change in Crime (construction of new hotel rooms follows the introduction of casinos into the county. These new hotel rooms seem to reduce the levels of larceny and motor vehicle theft. Turning to casinos and crime, I find very limited support for the proposition that new casinos increase local crime rates. Opening new casinos appears to increase the number of burglaries in the county after a lag of a few years. Opening new casinos appears, however, to reduce the number of motor vehicle thefts and aggravated assaults. Increased casino activity, measured using turnstile count of casino patrons, seems to reduce rates of larceny, motor vehicle theft, aggravated assault, and robbery.)

363. Reed, M. T. (n.d.). Social costs of pathological gamblers: An application for Marshall County, Kentucky. *Journal of Business and Public Affairs*, 1-9.

*This paper will have two main sections, cost descriptions and application of costs to Marshall County. The first section will include a summary of the descriptions and estimates of costs of Grinols and Mustard. The second section will use these estimates to make specific estimations of costs associated with Marshall County pathological gamblers for each cost category.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** All Gambling

**Location(s):** United States -- Kentucky -- Marshall County

**Years Impacts Examined:** ?

**Impacts:** Economic: Costs Related to Problem Gambling (The rough estimate of \$4,117,885 is associated with the pathological gamblers in Marshall County in the form of private and public costs)

364. Regional Economics Applications Laboratory - University of Illinois (2003). *Economic impact of the casino gaming industry on the State of Illinois and local communities*. Springfield, IL: Illinois State Chamber of Commerce & Illinois Casino Gaming Association.

*This report provides an economic assessment of three main issues associated with the gaming industry in the State of Illinois. In Part I, attention is directed to the economic impacts of the industry on the state's economy. The analysis is divided into four components: 1) Impact of the expenditures on goods and services; 2) Impacts of employee expenditures from wages and salaries; 3) Impacts of tax contributions to state and local governments; 4) Impact of additional slots on the state's economy. In Part II, the focus shifts from the state level to the community level, in an attempt to evaluate the economic impact of each casino on the economy in which it is located. Part III considers the potential economic impact of an additional license, to be located somewhere in northeastern Illinois.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States --Illinois

**Years Impacts Examined:** 2001

**Impacts:** Economic: Increased Government Revenue (largest contributor to the state's economy is the expenditure impact from tax revenues accruing to state and local governments -- these impacts account for between 54 and 58% of the total impacts)

Social: Increased Employment (gaming industry generates, directly and indirectly, nearly \$4.9 billion of production in the state, of which \$1.6 billion is allocated to wages and salaries; 55,000 jobs)

365. Reith, G., Ed. (2003). *Gambling: Who wins? Who loses?* Amherst, N.Y.: Prometheus Books.

*Values and choices: the struggle to find balance with permitted gambling in modern society / William R. Eadington -- From local to global gambling cultures / Jan McMillen -- Cutting the cards and craps: right thinking about gambling economics / Earl L. Grinols -- Grand illusions / Robert Goodman -- Community satisfaction with casino gambling: an assessment after the fact / B. Grant Stitt, Mark Nichols, and David Giacomassi -- Gambling and the law: the new millennium / I. Nelson Rose -- Is it a crime to bet on the net? / Michael E. Hammond -- Casino gambling and crime / Jay Albanese -- A fair deal for the player? regulation and competition as guarantors of consumer protection in commercial gambling / David Miers -- A critical view of pathological gambling and addiction: comorbidity makes for syndromes and other strange bedfellows / Howard J. Shaffer -- Pathological gambling: what's in a name? or, how the United States got it wrong / Mark Dickerson -- Is gambling an addiction like drug and alcohol addiction? developing realistic and useful conceptions of compulsive gambling / Stanton Peele -- Paying the piper: gambling and problem gambling in America / Rachel A. Volberg -- Youth gambling: some social policy issues / Jeffrey L. Derevensky, Rina Gupta, Karen Hardoon, Laurie Dickson, and Anne-Elyse Deguire -- Late-life gambling: the attitudes and behaviors of older adults / Dennis P. McNeilly and William J. Burke -- A public policy response to problem gambling / Keith Whyte -- The environmental psychology of gambling / Mark Griffiths and Jonathan Parke -- Probability on the casino floor / Neil A. Manson -- Regulating vice: America's struggle with wicked pleasure / Jerome H. Skolnick -- The moral case for legalizing gambling / Peter Collins -- Playing the gods: gambling and spirituality, a new anthropological perspective / Kathryn Gabriel -- Combustion: an essay on the value of gambling / John Scanlan.*

**Type:** Original Research

**Gambling Format:** Location(s):

**Years Impacts Examined:**

**Impacts:** N/A

366. Reith, G. (2006). *Research on the social impacts of gambling: Final report*: Scottish Executive Social Research.

*This study was undertaken through a review of the international research evidence, as well as relevant British research, on the social impacts of gambling and casinos. It also analysed fresh data from the 1999 Prevalence Survey of gambling in Great Britain to investigate patterns of gambling behaviour in Scotland.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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367. Robitaille, E. and Herjean, P. (2008). An analysis of the accessibility of video lottery terminals: The case of Montreal. *International Journal of Health Geographics [Electronic Resource]*, 7(2).

**BACKGROUND:** Researchers and public health officials in Canada, the United States and Australia have for some time noted broader geographic accessibility to gambling establishments, above all in socioeconomically underprivileged communities. This increase in availability could lead to more and more gambling problems. This article focuses, in an ecological perspective, in particular on a spatial analysis of the geographic accessibility of sites possessing a VLT permit in the Montreal area, i.e. Montreal Island, the South Shore and Laval, from the standpoint of the development of an indicator of the vulnerability (socioeconomic components and demographic components) to gambling of populations at the level of certain neighbourhood units (dissemination areas). With the recent development of geographic information systems (GIS), it is now possible to ascertain accessibility to services much more accurately, for example by taking into account the configuration of the road network. **RESULTS:** The findings of our analysis reveal widespread geographic accessibility to sites possessing a VLT permit in the downtown area and in pericentral districts. In some neighbourhood units, a site possessing a VLT permit may be within a three-minute walk. In the region studied overall, average walking time to a VLT site is nine minutes. Access to this type of service on foot is usually limited in the outskirts. However, a number of groups of sites possessing VLT permits are found along certain axial highways. According to local spatial self-correlation analyses, the findings suggest a significant link between walking accessibility to sites possessing VLT permits and the vulnerability of the communities. In a number of neighbourhood units with ready access to VLT's the populations display high vulnerability. **CONCLUSION:** These findings reveal that accessibility to sites possessing a VLT permit is often linked to the vulnerability (socioeconomic and demographic components) of communities. Reliance in our analyses on neighbourhood units with fairly small areas enabled us to emphasize the rectilinear dimension of the spatial distribution of sites possessing VLT permits. This is a significant link that public health officials must consider when elaborating programs to combat pathological gambling.

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Quebec -- Montreal

**Years Impacts Examined:** 2005

**Impacts:** Social: Problem Gambling and Related Indices (accessibility to sites possessing a VLT permit is often linked to the vulnerability [socioeconomic and demographic components] of communities.)

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368. Roehl, W. S. (1999). Quality of life issues in a casino destination. *Journal of Business Research*, 44(3), 223-229.

*Gambling is spreading across North America. Debate has accompanied this diffusion. This study: (1) describes attitudes held by Nevada residents about the effects of legalized gambling and (2) identifies the relationship among resident characteristics, perceptions of the impact gaming has had in Nevada, and perceived quality of life (QOL). Residents recognize that legalized gambling has brought both benefits and costs. Among interesting correlates, individuals with less education and urban residents perceived more social costs from legalized gaming. Perceived social costs are negatively correlated with QOL, whereas perceived job growth is positively correlated with QOL. These impacts are similar to those reported for other forms of mass tourism, and the data suggest that equity issues need further investigation.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Nevada

**Years Impacts Examined:** 1998?

**Impacts: Social:** Increased Positive Attitudes (slight majority of Nevada residents believe that gambling has made Nevada a better place to live)

369. Room, R., Turner, N. E. and Ialomiteanu, A. (1999). Community effects of the opening of the Niagara casino. *Addiction*, 94(10), 1449-1466.

*Aims. The impacts on the community of the opening of a casino in Niagara Falls are studied. Design. The study uses a pre/post design for the community data, with pre/post data from Ontario as a whole as a comparison. Setting. The study site is the city of Niagara Falls, Ontario, where a casino opened in early December, 1996. Participants. Using random-digit dialing, telephone interviews were conducted with adult residents of Niagara Falls in 1996 and 1997, and with adult residents of Ontario in 1995 and 1997. Measurements. Aside from demographic variables, measures included general attitudes to gambling, expectations about (1996) and experiences with (1997) the casino's opening, extent of participation in 11 types of gambling and 18 items on problems with gambling: Five key items from a standard gambling problems score (SOGS), five life-area problems items, and items on pressures from others concerning the respondent's gambling and on gambling problems among family and friends. Findings. Attitudes to gambling remained stable in Niagara Falls, while there was some evidence of decline in approval in Ontario as a whole. While strong majorities of 1996 respondents had expected many positive and negative effects on The Community of the Casino's opening, significantly fewer respondents in 1997 reported actually experiencing most of these effects. While a small increase in employment was found, it fell far below projections, a result probably reflecting displacement effects. The rate and level of casino gambling increased in Ontario, but increased even more in Niagara Falls, with little displacement of other gambling. Reported gambling problems increased significantly in Niagara Falls for two of 10 gambling problem items and for the short SOGS score, while rates were generally stable or declining in the province. Pressure from others about gambling rose significantly in Niagara Falls (in contrast to the province), and reported rates of family members or friends with gambling problems also rose substantially. There was an increasing trend in Niagara Falls for all 18 problem indicators. Conclusions. The casino's opening brought more gambling by local residents, and an increase in reported gambling problems; yet support for the casino, already strong, if anything grew. At least in the short term, problems from the increased availability of gambling manifested themselves not in the public arena but rather in the arena of private life.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Canada -- Ontario -- Niagara Falls

**Years Impacts Examined:** 1995-1997

**Impacts: Social:** Increased Negative Attitudes (Attitudes to gambling remained stable in Niagara Falls, while there was some evidence of decline in approval in Ontario as a whole); Increased Problem Gambling and Related Indices (Reported gambling problems increased significantly in Niagara Falls for two of 10 gambling problem items and for the short SOGS score, while rates were generally stable or declining in the province.)

370. Rose, A. (1998). *The regional economic impacts of casino gambling: Assessment of the literature and establishment of a research agenda. Prepared for the National Gambling Impact Study Commission.* State College, PA: Adam Rose and Associates.

*This report was sponsored by the National Gambling Impact Study Commission to assess the many studies on the economic impacts of casino gambling/gaming. This assessment includes: a) an itemization of many considerations affecting economic impacts, b) an evaluation of formal impact analysis modeling approaches, c) a detailed review of important features of 36 major studies, d) a metaanalysis of causal determinants, e) a point-by-point summary of findings, f) a set of guidelines for future studies, and g) a research agenda to close the knowledge gap. Economic*

*theory and the preponderance of evidence indicate that the aggregate direct and indirect impacts of the construction, operation, and taxation of casinos are significantly positive. Broader economic costs relating to such factors as the use of government services and changes in property values are not insignificant, but they do not come close to canceling out the more conventional output, income, and employment gains. Moreover, these broader negative impacts might be offset by some longer-term positive impacts stemming from increased spending of tax revenue on education, infrastructure, and redevelopment. This assessment does not factor in social costs of gambling, which are beyond the scope of this study, but warrant careful examination.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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371. Ross, M. (1995). *Assessment of the benefits and costs of the Manitoba Lotteries Corporation*: KPMG.

*A study was launched in May of 1995 to accurately and objectively summarize the economic benefits and potential social costs associated with gaming in Manitoba.*

**Type:** Original Research

**Gambling Format:** All Gambling

**Location(s):** Canada -- Manitoba

**Years Impacts Examined:** 1989-1995

**Impacts:** Economic: Increased Government Revenue; Increased Public Services (positive for charitable sector); Increased Infrastructure Investment (positive for spending on gambling capital costs and gambling services / infrastructure); Change in Business Revenue (short-term substitution of gambling consumer dollar; little long-term difference in overall small business impact)

Social: Increased Employment (\$301M labour income; 10K jobs)

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372. Rousseau, G. G. and Venter, D. J. L. (2006). The influence of gambling benefits and acceptability on casino gambling satisfaction. *Management Dynamics*, 15(1), 27-37.

*The primary objective of this study was to investigate the relationship between satisfaction and perceptions regarding gambling experiences and views on entertainment amongst guests at a local casino in the Eastern Cape. The study is an extension of previous research and used a modified questionnaire developed by various authors. The sample (n = 345) was drawn using a convenience sampling technique from respondents visiting the casino during a three-week period. Structural Equation Modelling (SEM) confirmed the existence of significant relationships between various determinants influencing respondents' gambling experience at the casino. These results confirmed the convergent and discriminant validity of a model comprising Gambling Motives, Gambling Values and Beliefs and Gambling Satisfaction. No relationship between Problem Gambling Knowledge and Gambling Satisfaction was, however, observed. These results have important implications for enhancing gambling satisfaction among casino guests.*

**Type:** Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A



**Impacts:** N/A

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373. Ryan, T. P. and Speyrer, J. F. (1999). *Gambling in Louisiana: A benefit/cost analysis. Prepared for The Louisiana Gaming Control Board*. New Orleans, LA: Division of Business and Economic Research, University of New Orleans.

*In 1998, total revenues for Louisiana's gambling industry were nearly \$2.2 billion, up from \$192.1 million in 1990. Unlike other industries, especially growth industries, gambling has faced a great deal of criticism by business, government, and religious leaders. In the face of this explosive growth and the constant questions posed about the industry, the Louisiana Legislature funded a study in the 1998 Fiscal Session to determine the economic impact of gambling on Louisiana. A consortium of researchers, led by Drs. Timothy P. Ryan and Janet F. Speyrer of the University of New Orleans, prepared a report for the Louisiana Gaming Control Board. This report is presented here.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Indian Gaming -- Casinos; Electronic Gambling Machines (EGMs); Horse Racing

**Location(s):** United States -- Louisiana

**Years Impacts Examined:** 1998

**Impacts:** Economic: Increased Government Revenue (\$255.56 in net revenue for the State from riverboat casino industry; a higher tax rate for casino gambling than other forms of spending; included in the figure is a reduction for displaced revenue; video poker and horse racing results examined separately; difference with horse racing is that the largest input into the production process -- the breeding and training of the horses -- occurs in the State of Louisiana almost exclusively); Increased Regulatory Costs (approximately \$50M for regulating, policing and running lottery game); Costs Related to Problem Gambling (estimate based on costs of problem gamblers extrapolated to entire population based on prevalence study figures; 29.9% of spending on riverboat casinos from problem gamblers, 42.3% of spending in Indian casinos from problem gamblers, 27.1% of spending on video poker from problem gamblers)

Social: Increased Employment (In 1998, riverboat and Indian casinos produced 20,156 jobs directly; not including any "multiplier effect")

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374. Sakurai, Y. and Smith, R. G. (2003). *Gambling as a motivation for the commission of financial crime*. Canberra, Australia Australian Institute of Criminology.

*At present, adult Australians spend \$13,839 million a year on gambling, or \$901 per adult per year. However, with increasing opportunities and venues for gambling, public concern about 'problem gambling' has grown. This paper examines one of the principal social costs of gambling, namely, gambling related crime, or crime committed by individual gamblers in order to finance their gambling. Recent studies supporting the relationship between problem gambling and financial crime are discussed, and the most effective judicial responses are assessed. The paper finds that gambling related crime is usually limited to non violent property crime, such as theft, shoplifting, embezzlement and misappropriation of money; discusses the relationship between gambling and the commission of fraud; and compares the patterns of offending of gambling motivated fraudsters and non gambling motivated offenders. The paper finds that pathological gambling addiction is rarely viewed by the courts as a mitigating factor in sentencing or one that requires special rehabilitative procedures, and argues that these findings raise a question as to the appropriateness of the current judicial response to gambling related financial crime.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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375. Schmidt, R., Barr, C. F. and Swanson, D. A. (1997). Socioeconomic impacts of the proposed Federal Gaming Tax. *International Journal of Public Administration*, 20(8,9), 1675-1698.

*The history of gaming and its taxation in the US are reviewed. It is suggested that raising taxes neither encourages moderation nor replaces negative external costs. A socioeconomic impact analysis of a proposed 4% Federal Gaming Tax is presented by simulating its impact on Clark County, Nevada, for the period 1995-2004 using a large scale econometric multi-regional model. The analysis reveals that the proposed tax would lead to a measurable decline in Clark County's jobs, population, disposable income, and total industrial during the forecast period. By 2004, total industrial output would be 1.3% lower under the proposed tax and Clark County would experience a loss of \$1.39 in real disposable income for every gaming tax dollar collected by Federal Government. These reductions, coupled particularly with the loss of thousands of jobs in Las Vegas area hotels/casinos predicted by the analysis, suggest that increased demands on social services in Clark County would result.*

**Type:** Original Research; Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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376. Settles, T. (2008). Cashing in: A view of one state's experiences with commercial gaming and moral hazard. *Public Integrity*, 10(4), 301-316.

*Despite the widespread social acceptance of gaming and the virtual explosion of the gambling industry, little is understood about the relationship between government and legal gambling, particularly with respect to ethics. This article is the result of a case study that views the experiences of Colorado with commercial gaming. It explores special ethical considerations, including an examination of opportunities for conflict of interest and for moral hazard. The discussion begins with a macrolevel perspective of commercial gaming in the United States and then focuses on the phenomenon in two towns in Colorado. The findings of this study pertain to taxation, the nature of the codependent relationship between government and gambling, and the treatment of the issue of problem gambling.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Colorado

United States -- Colorado -- Black Hawk

United States -- Colorado -- Central City

**Years Impacts Examined:** 2006?

**Impacts:** Economic: Increased Government Revenue (analysis of the impacts of Colorado commercial gaming shows that the state is the biggest winner -- apart from the commercial gaming industry)

Social: Changed Values (The findings of this study assert that states precipitate moral hazard when they form partnerships - whether contractual, statutory, or regulatory - to generate increased revenues and fail to address the issue of disordered gambling.)

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377. Sévigny, S., Ladouceur, R., Jacques, C. and Cantinotti, M. (2008). Links between casino proximity and gambling participation, expenditure, and pathology. *Psychology of Addictive Behaviors*, 22(2), 295-301.

*Two studies investigated the relationship between casino proximity and gambling participation, expenditure, and pathology. In Study 1, 8,842 participants were categorized into 1 of 4 driving distances from their home to the nearest casino in the province of Quebec: 0-100 km, 100.01-200 km, 200.01-300 km, or 300.01-981 km. In Study 2, 5,158 participants, who lived within a 100-km driving distance from the Montreal casino, were classified into 1 of 5 equidistant, 20-km driving distances. A survey company interviewed participants regarding their gambling habits. Results indicated a positive link between casino proximity and gambling participation (at the provincial and Montreal levels) and expenditure (at the provincial level only) but no link with the current prevalence rate of probable pathological gambling or of problem gambling. In a setting in which many types of gambling activities are available, casino proximity in itself does not appear to explain the rate of gambling-related problems. It is necessary to continue prospective research on exposure and adaptation theories as potential explanations for the development of pathological gambling.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Canada -- Quebec

**Years Impacts Examined:** 2002

**Impacts:** Social: No Impact on Problem Gambling (in a province where casinos have been open since 1993 (9 years before data collection), the current prevalence rates of PPG and PG are not higher near a casino than they are farther away from it; presence of various gambling opportunities other than casino games may suggest a viable interpretation for the lack of relationship between casino proximity and gambling problems)

378. Shaffer, H. J., LaBrie, R. A. and LaPlante, D. (2004). Laying the foundation for quantifying regional exposure to social phenomena: Considering the case of legalized gambling as a public health toxin. *Psychology of Addictive Behaviors*, 18(1), 40-48.

*Exposure and adaptation models provide competing perspectives of the environmental influence on the development of addictive disorders. Exposure theory suggests that the presence of environmental toxins (e.g., casinos) increases the likelihood of related disease (e.g., gambling-related disorders). Adaptation theory proposes that new environmental toxins initially increase adverse reactions; subsequently, symptoms diminish as individuals adapt to such toxins and acquire resistance. The authors describe a new public health regional exposure model (REM) that provides a tool to gather empirical evidence in support of either model. This article demonstrates how the strategic REM, modified to examine gambling exposure, uses standardized indices of exposure to social phenomena at the regional level to quantify social constructs.*

**Type:** Original Research; Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

379. Sharp, J. I. (2005). *Discourse and urban development: Contestation over riverboat casinos in two midwestern cities*. United States -- Illinois: University of Illinois at Urbana-Champaign. Ph.D.

*As older industrial cities adjust to post-Fordist realities and a new service based economy, many are transforming their central business districts into entertainment centers in an effort to increase tourism and improve the overall quality of life for residents. For some cities, the shift toward a consumption-based economy includes the legalization of casino gambling. Although casinos were illegal until in virtually every state until the late 1980s, many cities are turning to gambling as a means of attracting tourists, increasing tax revenues and stimulating the local economy. However, casino gambling is fraught with social problems and increasingly fails to produce the desired financial gains. This being the case, this research examines how the gambling industry is able to get casino legislation passed and, more importantly, how casino developers are able to manufacture the necessary public consent to do so. This research combines geographic inquiry along with a content analysis of local and national media in order to demonstrate the importance of discourse in the creation of public consent. In order to carry out this research, two cities that considered legalized gambling were selected; one that adopted a riverboat casino and one that rejected such a proposal. By setting up a comparative case study of two similarly situated cities in central Illinois, it is possible to examine how the crafting and control of language, when tied to local growth coalitions and sense of place, can be use to help determine the outcome of riverboat casino legislation.*

**Type:** Original Research

**Gambling Format:** Casinos; Casinos -- Riverboat

**Location(s):** United States -- Illinois -- Peoria

United States -- Illinois -- Decatur

**Years Impacts Examined:** 1989-1994

**Impacts:** N/A

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380. Shaw, M. C., Forbush, K. T., Schlinder, J., Rosenman, E. and Black, D. W. (2007). The effect of pathological gambling on families, marriages, and children. *CNS Spectrums*, 12(8), 615-622.

*Pathological gambling (PG) is widely reported to have negative consequences on marriages, families, and children. Empirical evidence is only now accumulating but when put together with anecdotal information, the extent of these problems is clear. PG contributes to chaos and dysfunction within the family unit, disrupts marriages, leading to high rates of separation and divorce, and is associated with child abuse and neglect. Divorce rates are high, not surprising in light of reports that these marriages are often abusive. Research shows that the families of pathological gamblers are filled with members who gamble excessively, suffer from depressive or anxiety disorders, and misuse alcohol, drugs, or both. Families of persons with PG are also large, a variable independently related to family dysfunction. The authors review the evidence on the impact of PG on families, marriages, and offspring, and make recommendations for future research targeting these problems.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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381. Shepherd, R.-M., Ghodse, H. and London, M. (1998). A pilot study examining gambling behaviour before and after the launch of the National Lottery and scratch cards in the UK. *Addiction Research*, 6(1), 5-12.

*This study monitored gambling behaviour in 206 residents of Cambridgeshire before and after the launch of United Kingdom's National Lottery. A gambling questionnaire which included the gambling criteria from the Diagnostic Statistical Manual-IV. questions about demographic data, and National Lottery and scratch cards purchases was*

administered randomly to residents in Cambridgeshire. The study found that the affirmative responses in the DSM-IV criteria increased significantly at 6 months after the introduction of the National Lottery and remained at that level at the 12 month follow up. Although symptoms of pathological gambling rose, there was no increase in cases of pathological gamblers. Furthermore, individuals with annual household incomes of less than £ 20,000 and individuals with less than an O level education purchased more National Lottery tickets and scratch cards per week. This may suggest that these people may be vulnerable to develop problems with lottery and scratch card play.

**Type:** Original Research

**Gambling Format:** Lotteries; Instant Win Tickets

**Location(s):** United Kingdom

**Years Impacts Examined:** 1994; 1995

**Impacts:** Social: Increased Problem Gambling and Related Indices (a significant ( $p < 0.05$ ) increase in problematic gambling behaviour within the sample monitored over a one year period and provides evidence that the introduction of new gambling opportunities has had an impact on gambling patterns.)

382. Siegel, D. and Anders, G. (1999). Public policy and the displacement effects of casinos: A case study of riverboat gambling in Missouri. *Journal of Gambling Studies*, 15(2), 105-121.

*A critical issue in assessing the economic impact of casinos is whether gambling activity displaces consumer expenditure from conventional retail establishments. We test this hypothesis using industry-level, time series data for eleven counties in Missouri, a state that recently introduced riverboats. Our results are generally inconsistent with the displacement hypothesis. However, we do find evidence of substitution between gambling and other businesses in the entertainment and amusement sector. This conclusion lends credence to the view that gaming serves as a substitute for other forms of entertainment. Our results also imply that the search for displacement should probably be focused on activities that constitute the closest consumer substitutes. We conclude with a discussion of the policy implications for state regulation of this new source of revenue.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos -- Riverboat

**Location(s):** United States -- Missouri

**Years Impacts Examined:** 1994-1996

**Impacts:** Economic: Decrease in Business Revenue (This study examines the hypothesis that growth in riverboat gambling is associated with revenue displacement in other economic sectors. The results are not broadly consistent with this hypothesis. However, we do find that an increase in riverboat gambling results in a significant decline in sales tax revenues derived from entertainment and amusement establishments)

383. Siegel, D. and Anders, G. (2001). The impact of Indian casinos on state lotteries: A case study of Arizona. *Public Finance Review*, 29(2), 139-147.

*Gambling is a rapidly growing industry with competing private, public, and Native American tribal interests. To examine the effects of this competition, the authors outline a simple econometric model for assessing substitution between lottery games and other forms of gambling. They estimate the model to examine whether an expansion in Indian casino gaming in Arizona is associated with a decline in lottery revenues. The findings imply that there is indeed a substitution effect.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Indian Gaming -- Casinos; Lotteries

**Location(s):** United States -- Arizona

**Years Impacts Examined:** 1993-1998

**Impacts:** Economic: Change in Government Revenue (results imply that an expansion of slot machines is associated with a reduction in lottery revenues; strongest displacement effects were found for Lotto. Thus, the findings imply that, at least for Arizona, there is indeed a substitution effect.)

384. Simmons, C. W. (2006). *Gambling in the Golden State 1998 forward*. Sacramento, CA: California Research Bureau.

*This report was requested by California Attorney General Bill Lockyer and provides an overview of gambling in California since 1998, including its social and economic impacts. The report considers each segment of the gambling industry in a separate chapter: Indian casinos, the state lottery, horse racing, card rooms and Internet gambling. The final two chapters broadly examine the literature on the social and economic impact of the gambling industry.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

385. Sinclair, S. (2004). *The feasibility of electronic and/or casino gaming in Kansas*. Prepared for The Kansas Lottery. New Gloucester, ME: Christiansen Capital Advisors.

*The Kansas Lottery is reviewing the feasibility and desirability of expanded gaming in the Sunflower State. To assist in this review the Lottery has retained Christiansen Capital Advisors, LLC and Behavioral Research Center, Inc. to conduct market research and related services pertaining to electronic and/or casino gaming in the State of Kansas.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

386. Sinclair, S. (2006). *Community impacts of a Narragansett Casino in West Warwick*. New Gloucester, ME: Christiansen Capital Advisors, LLC.

*Christiansen Capital Advisors, LLC ("CCA") has been retained by the Town of West Warwick ("the Town") to update our previous analyses of the economic impacts of a casino privately owned and privately operated by a business entity established pursuant to Rhode Island law by the Narragansett Indian Tribe and its chosen partner Harrah's Entertainment, Inc. (HET) and located between the James P. Murphy Industrial Highway and Lacroix Drive in West Warwick, Rhode Island. CCA has reviewed the economic impacts of the proposed casino on the Town, focusing on the impacts to citizens as residents and as employees. Taxes, in lieu of tax payments, and other projected Town revenues arising from the proposed casino are excluded from this review. This report presents these results. CCA examined a scenario in which a casino resort facility with approximately 140,000 square feet of casino floor, 150*

*table games of the kind offered at Foxwoods and Mohegan Sun, 3,500 slot machines and other gaming devices of the kind offered at Foxwoods and Mohegan Sun, 500 hotel rooms, five restaurants, spa, premium lounge and 55,000 square feet of meeting space is constructed between the James P. Murphy Industrial Highway and Lacroix Drive in West Warwick, Rhode Island at an approximate total cost of \$1 billion (Exhibit 1).*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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387. Single, E. (2003). Estimating the costs of substance abuse: Implications to the estimation of the costs and benefits of gambling. *Journal of Gambling Studies*, 19(2), 215-233.

*This presentation describes a recently developed set of guidelines for estimating the economic costs of substance abuse, summarizes the findings from a Canadian study that utilized these guidelines, and discusses the implications to the potential development of guidelines for estimating the costs and benefits of gambling. The guidelines for estimating the costs of substance abuse present a general framework of costs to be included and discuss methodological issues such as the definition of abuse; determination of causality; comparison of the demographic and human capital approaches; the treatment of private costs; the treatment of nonworkforce mortality and morbidity; the treatment of research, education, law enforcement costs, the estimation of avoidable costs and budgetary impact of substance abuse, and the significance of intangible costs. Utilizing these guidelines, a study was undertaken to estimate the economic costs of alcohol, tobacco, and illicit drugs to Canadian society in 1992. Based on this experience, it is argued that cost/benefit research should be conducted by multidisciplinary teams, that the real value of such work lies more in the detailed findings than in the bottom line results, and that focus should be placed on developing an ongoing process for developing consensus on how to conduct studies of the costs and benefits of gambling, rather than attempting to find a precise methodology that everyone agrees upon.*

**Type:** Original Research; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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388. Singleton, Q. R. (2008). Framework on controlling the socioeconomic costs of compulsive gambling. *Gaming Law Review*, 12(1), 37-53.

*The intent of this paper is to utilize the WHO Framework and currently implemented compulsive gambling control measures to develop a legislative and regulatory framework that policymakers, governments, and others can use as a guidebook for instituting legislative and regulatory control measures for minimizing the socioeconomic costs associated with compulsive gambling.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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389. Smeral, E. (1998). Economic aspects of casino gaming in Austria. *Journal of Travel Research*, 36(4), 33-39.

*Analyzes the effects generated by money spent on casino games in Austria. Role of gaming in business and society; Gaming in the national accounts; Development of casino gaming in Austria; Casinos as a factor of the leisure-time and tourist industry; Regional and overall aspects.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** Austria

**Years Impacts Examined:** 1980-1995

**Impacts:** Economic: Increased Government Revenue; Increased Business Revenue (positive for tourism)

Social: Changed Leisure Activity

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390. Smith, G., Wynne, H. and Hartnagel, T. (2003). *Examining police records to assess gambling impacts: A study of gambling-related crime in the City of Edmonton*. Edmonton, AB: Alberta Gaming Research Institute.

*This report contains five major sections: First, we outline the role that gambling plays in Canada and the Province of Alberta; justify the need for the study; and present the background, purpose and goals of the project. Secondly, we survey the literature and review criminological theory pertinent to gambling-related crime. The methods and procedures used to gather and analyze the data are described in section three and, in section four; the results of the study are presented. Finally, in section five we draw conclusions from the findings and identify implications these findings have for government, law enforcement agencies and the community at large.*

#### **GOOD QUALITY**

**Type:** Original Research

**Gambling Format:** Casinos; Bingo; Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Alberta -- Edmonton

**Years Impacts Examined:** 2001-2002

**Impacts:** Social: Increased Crime (The number of crimes linked to gambling in the EPS files may seem quantitatively unsubstantial. However, given that gambling-related crimes are not well identified, sometimes handled by AGLC investigators or gambling venue security officials, or simply undetected, this research shows only the tip of the iceberg. When EPS and AGLC gambling-related crime data are combined, they account for a significant body of criminal activity, requiring constant vigilance and effective coordination between law enforcement agencies; crimes commonly associated with problem gambling (fraud, domestic violence, theft, and suicide) are linked to the gambling formats with the highest addictive potency.)

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391. Smith, G. J. and Campbell, C. S. (2007). Tensions and contentions: An examination of electronic gaming issues in Canada. *The American Behavioral Scientist*, 51(1), 86-101.

*This article addresses electronic machine gambling in Canada, in particular, how it evolved, the social problems associated with the activity, and why it continues to flourish in spite of evidence-based research showing it to be the most addictively potent gambling format. Also discussed are the corporate principles applied to the promotion of electronic machine gambling and how this distorts regulatory objectives.*



**Type:** Original Research  
**Gambling Format:** N/A  
**Location(s):** N/A  
**Years Impacts Examined:** N/A

**Impacts:** N/A

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392. Smith, G. J. and Hinch, T. D. (1996). Canadian casinos as tourist attractions: Chasing the pot of gold. *Journal of Travel Research*, 34(3), 37-45.

*The commonly held belief that casinos automatically function as tourist attractions is questioned. It is suggested that while many casinos do exhibit many of the characteristics of typical tourist attractions, they also differ in many ways. Casinos can attract visitors from outside the destination, are characterized by strong central elements and are often marked as attractions. However, casinos appear to vary from typical attractions, especially in terms of the nature of the attraction nuclei. Casino location is not highly constrained by the spatial distribution of natural or cultural resources, as is often the case with other types of attractions. In addition, in contrast to the broadly held assumption that large-scale casinos will automatically function as tourist attractions, there is no guarantee that they will. Like most tourism developments, the unique characteristics of each proposal must be carefully considered. Canada's experience with casino development provides a good illustration of these concerns. With the exception of the Windsor venue, Canadian casinos are not major tourist attractions.*

**Type:** Original Research; Secondary Analysis  
**Gambling Format:** N/A  
**Location(s):** N/A  
**Years Impacts Examined:** N/A  
**Impacts:** N/A

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393. Smith, G. J. and Wynne, H. J. (1999). *Gambling and crime in Western Canada: Exploring myth and reality*. Calgary, AB: Canada West Foundation.

*The report presents a first of its kind examination of the relationship between gambling and crime in Canada. Based on interviews with law enforcement, regulatory and judicial personnel dealing with gambling crime, the authors set out to examine the extent to which illegal gambling, gambling-related crime, and crimes by problem gamblers impact on our communities.*

**Type:** Original Research  
**Gambling Format:** All Gambling  
**Location(s):** Canada -- Manitoba  
 Canada -- Saskatchewan  
 Canada -- Alberta  
 Canada -- British Columbia  
**Years Impacts Examined:** 1994-1999

**Impacts:** Social: Change in Crime (dampens illegal gambling, but may increase other forms)

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394. Smith, G. J. and Wynne, H. J. (2000). *A review of the gambling literature in the economic and policy domains*.

Edmonton, AB: Alberta Gaming Research Institute.

*This summary report is divided into three sections: (1) a discussion of the scholarly literature on the economics of gambling; (2) a discussion of the literature that highlights government and industry gambling policy and practice; and (3) appendices which include a list of the databases searched and key words utilized; an annotated bibliography that includes citations and abstracts of articles; and a list of contributions from Alberta researchers.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

395. Smith, G. J. and Wynne, H. J. (2004). *VLT gambling in Alberta: A preliminary analysis*. Edmonton, AB: Alberta Gaming Research Institute.

*The purpose of this project is to investigate VLT gambling in the Province of Alberta to determine (1) the social, economic, and political forces that precipitated its evolutionary growth, (2) the pattern of VLT placements and customer expenditures, and (3) the demographic and behavioral profile of VLT playing non-problem and problem gamblers.*

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Alberta

**Years Impacts Examined:** 2002

**Impacts:** Social: Problem Gambling and Related Indices (Evidence of a high problem gambling prevalence rate among Alberta VLT players)

396. Snyder, J. T. (1999). *The effects of casino gaming on Tunica County, Mississippi: A case study 1992-1997*. Mississippi State, MS: Social Science Research Center, Mississippi State University.

*During the last decade, Tunica County, Mississippi has experienced a higher level of social and economic change than any other county in the United States. It has been transformed from one of the poorest, poverty-laden counties, to the third largest casino-based resort area in the U.S.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Mississippi -- Tunica County

**Years Impacts Examined:** 1992-1997

**Impacts:** Economic: Increased Business Revenue (retail sales rose dramatically with most of that increase attributed directly to casinos); Increased Infrastructure Investment (strong upward trend based on casino and hotel construction; comparatively lower levels of residential construction)  
Social: Increased Employment (unemployment rate cut in half since the advent of casinos; actual # of people unemployed remained stable; civilian labor force expanded dramatically; food stamp use was cut by more than half); Increase in Problem Gambling and Related Indices (adverse impact from gambling on bankruptcies but unclear as to the extent); Increase in Crime (enormous increase but reflects the increase in transient population)

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397. So, H.-T. and Kwok, N.-K. (n.d.). No longer an entertainment: Social cost of problem gambling in Hong Kong.

*As a means to provide a comprehensive picture about the costs of problem gambling in Hong Kong, in this paper, we would also deal with total cost, private cost and social costs. As a result, costs are divided into three categories: individual costs (private cost), familial costs and societal costs (social cost) and the summation of the above costs is treated as the total cost of problem gambling, so as to reflect how compulsive gambling affects the individuals, gamblers' families and the society as a whole.*

**Type:** Original Research

**Gambling Format:** All Gambling

**Location(s):** Hong Kong

**Years Impacts Examined:** 2006

**Impacts:** Economic: Costs Related to Problem Gambling (annual median social costs of problem gambling per gambler are \$39,750)

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398. South Australian Centre for Economic Studies, O'Neil, M., Chandler, N., Kosturjak, A., Whetton, S. and Lindsay, S. (2008). *Social and economic impact study into gambling in Tasmania. Report commissioned by Department of Treasury and Finance Tasmania.*

*The South Australian Centre for Economic Studies (SACES) has undertaken an analysis and review of the social, financial and economic impact of gambling in Tasmania and herein we summarise the findings of the study. The final report is presented in two volumes: Volume 1: Social and Economic Impact (ToR: (a), (b) and (d)); and Volume 2: The Prevalence Study identifying the incidence of problem gambling and community attitudes (ToR (c)).*

#### EXCELLENT QUALITY

**Type:** Original Research; Secondary Analysis; Methodological Issues

**Gambling Format:** All Gambling; Electronic Gambling Machines (EGMs)

**Location(s):** Australia -- Tasmania

**Years Impacts Examined:** 1983-2007

**Impacts:** Economic: Increased Government Revenue (\$84.3 million in 2006/07 this represented 11.5 per cent of state own source revenue); No Impact on Business Revenue (significantly contribution to economic growth in the aggregate economy is not substantiated, while equally the claims that spending on gambling has impacted on traditional areas of spending (i.e. retail) is equally not able to be substantiated; levels of gambling expenditure does not affect the level of non-gambling final consumption expenditure)

Social: No Impact on Employment (data sources are poor but appears to be little impact)

Increased Consumer Surplus (form of economic impact from gambling whose effect was unambiguously positive was the consumer surplus); Increased Problem Gambling and Related Indices (main source of gambling problems derive from EGMs); Increased Crime (A positive and significant relationship was found between gaming expenditure and some crime rates, particularly "income generating crimes")

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399. South Waikato District Council (2006). *Gambling in the South Waikato district: An assessment of social and economic impacts.* Tokoroa, New Zealand: South Waikato District Council.

*The purpose of this report is to inform South Waikato District Council and key stakeholders of relevant facts prior to*

*a review of Council's Gambling (Class 4 and Board Venues) Policy. It provides an assessment of the social benefits and costs of gambling, including health and economic effects, with a particular focus on the impacts of electronic gambling machines ("pokie machines").*

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** New Zealand -- South Waikato District

**Years Impacts Examined:** 2003-2006

**Impacts:** Economic: Increased Public Services (\$3.2 million of grants per year for charitable purposes); Decrease in Business Revenue (Diversion of at least \$5.2 million to \$8.5 million per year from other industries)

Social: Increased Leisure Activity (by revealed preference, the entertainment value of gambling in the South Waikato is worth at least \$5.2 million per year); Problem Gambling and Related Indices (150 - 600 problem gamblers); Increased Socioeconomic Inequality (disproportionate effect on low income households)

400. Spectrum Gaming Group (2008). *Comprehensive analysis: Projecting and preparing for potential impact of expanded gaming on Commonwealth of Massachusetts*. Linwood, NJ: Spectrum Gaming Group.

*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.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

401. Spectrum Gaming Group (2009). *Gambling in Connecticut: Analyzing the economic and social impacts*. Linwood, NJ: Spectrum Gaming Group.

*The state of Connecticut, Division of Special Revenue, retained Spectrum Gaming Group to conduct a comprehensive analysis of the social and economic impacts of all forms of legal gambling in Connecticut. State law requires that such a study be conducted to determine the types of gambling activity in which citizens are engaging, and the desirability of expanding, maintaining or reducing the amount of legalized gambling in the state. The last Connecticut gaming-impact study was completed in June 1997.*

## EXCELLENT QUALITY

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Indian Gaming -- Casinos; Lotteries; Off-Track Betting; Charitable Gambling

**Location(s):** United States -- Connecticut

**Years Impacts Examined:** 1992-2008

**Impacts:** Economic: Increased Government Revenue: (\$4.7 billion in contributions to the General Fund as of the end of FY 2008); Changes in Public Services (contributions to charitable causes; but Charitable gaming, like Off-Track Betting, has also seen significant declines in gross receipts for non-profit organizations.); Increased Infrastructure Investment (hotels built take advantage of the presence of the casino resorts); Increased Business Failures (state's last jai alai fronton, in Milford, closed in 2001 and the two greyhound parks ceased live dog racing

in 2005. Live horse racing is still authorized by statute, but no horse track has ever operated.); Increased Regulatory Costs.

**Social:** Increased Employment (casino indirect and induced jobs created in Connecticut is about 30,000); Increased Problem Gambling and Related Indices (Problem Gambling Services division has experienced a more than six-fold increase in its caseload from 2001 to 2008); Decreased Public Health (dramatic increase in highway traffic, a rise in driving-while-intoxicated arrests, increased costs related to ESOL programs and a myriad of social problems as well. A housing shortage has resulted in the conversion of single-family homes into illegal boarding facilities; no correlation between lottery sales and poverty); Increased Crime (State and federal law enforcement officials made 43 embezzlement arrests in 1992, the year the first Indian casino opened. In 2007, the most recent year that statistics are available, the number increased to 214.)

402. Spilde, K. A., Taylor, J. B. and Grant, K. W. (2002). *Social and economic analysis of tribal government gaming in Oklahoma*. Cambridge, MA: John F. Kennedy School of Government, Harvard University.

*It is clear that tribal gaming in Oklahoma is a growing industry with a range of positive social and economic impacts. The next sections delve more deeply into tribal gaming policy and its effect on both the State of Oklahoma and Indian nations in Oklahoma. Section II answers the question: Why tribal government gaming? Many Americans are under the impression that Indian nations were given the right to offer gaming by the federal government, but that is not the case. Tribal governments initiated gaming themselves as a means to address severe federal funding shortfalls. Moreover, federal tribal gaming policy is an expression of modern Indian self-determination policy—the only successful federal policy to address Indian poverty in this century. Section II shows why that policy has been successful and why tribal gaming policy is a wholly consistent extension of it. Section III then examines the economic impact of tribal gaming on the State of Oklahoma. A common criticism of gaming asserts that gaming cannibalizes existing businesses and does not generate net new activity. While the view is partly true in that consumers might choose to go to more movies were gaming not an option, the view misses some larger points. Section III shows how gaming generally, and tribal gaming in Oklahoma in particular, can generate net new growth in three ways: i) by retaining Oklahoma residents who might otherwise have gone out of state for gaming entertainment; ii) by attracting out-of-state tourists to Oklahoma, and iii) by increasing the intensity of economic activity within the state. Section IV turns to the question of gaming's impact on Indian nations in Oklahoma. While American Indians in Oklahoma fare better than their counterparts in other states along some social dimensions, in many respects, American Indians stand on the lower rungs of Oklahoma's socioeconomic ladder. Since tribal gaming is governmental gaming, it offers the prospect of substantial social reinvestment to address the critical social and economic deficits American Indians have long faced. Section IV documents what tribes have done to diversify their economies, educate their people, and otherwise invest gaming revenues in the vitality of their communities. As this report will illustrate, such investments spill over to the local non-Indian communities in positive ways. Many opponents of gaming argue that the benefits of gaming come at too high a price — that gaming brings social costs in the form of problem gambling behavior. It is beyond the scope of our research to provide Oklahoma-specific data on the prevalence and cost of gambling pathology and problems. Nonetheless, substantial scientific research exists on the national and international scale and scope of problem gambling that can be used as a starting point for policy analysis in Oklahoma. Section V reviews that work.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming—All Gambling

**Location(s):** United States -- Oklahoma

**Years Impacts Examined:** 1993-2000

**Impacts:** Economic: Increased Government Revenue (turned over an estimated \$208 million in revenue); Increased Public Services (transferred on the order of \$83 million to their respective tribal governments); Increased Infrastructure Investment (from 1993 to 2000, 9 tribes spent a total of \$37 million dollars)

Social: Increased Employment (employ a significant number of both Indians and non-Indians; directly employed an estimated 3,857 people; paid \$43 million in wages and salaries; withheld an estimated \$500,000 in state

unemployment taxes); Increased Public Health (tribal gaming has allowed Indian nations in Oklahoma to improve tribal services, thus providing tribal members with a quality of life that may be approaching that of other Oklahomans and other Americans.)

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403. Steinmann, F. A. (2004). *An econometric study of the effect regulatory systems have on state gaming tax revenue*. United States -- Nevada: University of Nevada, Reno. M.S.

*During the late 1990's, most state legislatures were forced to confront growing state budgetary deficits. These jurisdictions were forced to raise taxes or cut state spending. In an effort to increase the total tax base and raise total state revenue, many jurisdictions adopted some form of casino gaming. Each jurisdiction, faced with a unique set of internal and external pressures, introduced different forms of casino gaming. Mississippi introduced Nevada and New Jersey style casinos; Delaware introduced "racino" casinos that allowed racetrack owners to install slot machines while Iowa, Illinois and Missouri chose to introduce riverboat casinos. Each jurisdiction adopted different gaming regulatory controls that created different levels of total gaming tax revenue for each jurisdiction depending on the level of "conservative" or "liberal" regulatory control found in each jurisdiction. This study indicates that as a jurisdiction liberalizes its own gaming regulatory system, gaming tax revenue began to increase at an increasing rate.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Nevada

United States -- Mississippi

United States -- Iowa

United States -- Missouri

United States -- Delaware

United States -- Illinois

**Years Impacts Examined:** 1994-2003

**Impacts:** Economic: Increased Government Revenue (liberalization of gaming regulatory system produces increases in gaming tax revenues)

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404. Stevens, R. M. G. and Williams, R. J. (2004). *Socio-economic impacts associated with the introduction of casino gambling: A literature review and synthesis*.

*This review is an attempt to comprehensively identify and synthesize the literature examining the socio-economic impacts associated with the introduction of casino-style gambling. Search terms used for the literature review included but were not limited to the following keywords and subject headings / descriptors: "gambling", "gaming", "casino", "casinos", "casino gambling", "casino gaming", "socioeconomic", "socioeconomic", "social", "economic", "effects", "impacts", "introduction". It should be noted that each database generally uses its own terminology which makes searching unique. The academic literature on the socio-economic impacts of gambling is quite extensive and an effort was made to limit results to articles and reports published after 1990 that related specifically to casino-style gambling.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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405. Stitt, B. G., Nichols, M. and Giacomassi, D. (2003). Does the presence of casinos increase crime? An examination of casino and control communities. *Crime & Delinquency*, 49(2), 253-284.

*This study is an analysis of crime in six new casino communities and compares the crime rates to those found in six noncasino control communities. The experimental and control communities were matched on 15 socioeconomic variables. The crime rates were calculated using resident population and population at-risk, which includes tourists in the crime rate calculations. Both Part I and Part II crimes were analyzed using data encompassing the pre- and postcasino presence. Crime was expected to rise in the casino communities, consistent with routine activity theory and the belief that casinos serve as hot spots for crime. The analysis yielded few consistent findings across the test and control communities. Crime rates increased significantly in some casino communities, some remained relatively stable, and others decreased. The authors conclude that crime does not inevitably increase with the introduction of a casino into a community, but that the effects of casinos on crime appear to be related to a variety of variables which are only poorly understood.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa -- Sioux City

United States -- Missouri -- St. Joseph

United States -- Missouri -- St. Louis

United States -- Missouri -- St. Louis County

United States -- Illinois -- Alton

United States -- Illinois -- Peoria

United States -- Illinois -- East Peoria

United States -- Mississippi -- Biloxi

**Years Impacts Examined:** 1987-1997

**Impacts:** Social: No Impact on Crime (there still can be no conclusive statement regarding the effect that casinos have on crime. The fact that the 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)

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406. Stitt, B. G., Nichols, M. and Giacomassi, D. (2005). Perception of casinos as disruptive influences in USA communities. *The International Journal of Tourism Research*, 7(4,5), 187-200.

*Casino gambling has been adopted by many communities as a means of increasing tourism and tax revenue. Casinos, however, are a controversial tourism development strategy. The present paper uses social exchange theory to examine the effects of casinos in eight communities that have had casino gambling for at least 4 years. Residents were asked to comment on possible disruptive influences that could be tied to casino presence. These disruptive influences include not only serious crimes but also publicly visible nuisance crimes such as drinking in public, vandalism and prostitution. Also assessed are such factors as perceived increases or decreases in physical decay of the communities, presence of litter on streets and sidewalks, homelessness, traffic congestion, and prevalence of divorce, suicide and bankruptcy. The majority of respondents do not perceive significant changes in most disruptive influences. However, findings vary significantly by community, by type of disruptive influence, and by whether the respondent was a gambler or non-gambler. The results of this analysis should be of interest to communities considering casino gambling as a new tourist attraction.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa -- Sioux City

United States -- Missouri -- St. Joseph  
 United States -- Missouri -- St. Louis  
 United States -- Missouri -- St. Louis County  
 United States -- Illinois -- Alton  
 United States -- Illinois -- Peoria  
 United States -- Illinois -- East Peoria  
 United States -- Mississippi -- Biloxi

**Years Impacts Examined:** 1987-1997

**Impacts: Social:** No Impact on Attitudes (For all of the indicators of disruption to community life that are examined, with the exception of bankruptcy and divorce, a majority of the respondents perceived that there was no change in rates of occurrence as a result of casino presence in the community; those that benefit from the casino (gamblers), view casinos more favourably. Non-gamblers, in contrast, have less direct benefit from the casino and are more likely to indicate an increase in the various disruptive influences.)

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407. Stitt, G. B. (2000). *Effects of casino gambling on crime and quality of life in new casino jurisdictions. Prepared for the U.S. Department of Justice.*

*This study provides a multi-dimensioned assessment of the impact of casino gambling in eight new casino jurisdictions, Alton, Peoria and East Peoria, Illinois; Sioux City, Iowa; St. Joseph, St. Louis, and St. Louis County, Missouri; and Biloxi, Mississippi. These locations were chosen because each had recently initiated casino gambling and law enforcement officials were willing to make available Part I and Part II crime data for four years before and four years after the casinos opened. There were three main components of the research plan. The first component consists of site visits to each location. A second major component consisted of telephoning several hundred residents in each community to obtain their opinions regarding the impact of casinos. The third component consists of gathering a variety of official data to determine how the communities changed once casinos were introduced. The findings reported were two-fold: findings relating official crime statistics to the advent of casinos, and findings relating to casino presence to community perceptions and quality of life issues included problem gambling, suicide, and divorce, bankruptcy, social capital, quality of life, and community satisfaction. The findings suggest that when casinos are introduced to a community the impact varies by community. In three communities, there were many more crimes that significantly decreased than increased. When studying these eight jurisdictions, it becomes clear that not all communities experience the same "casino effect". It was important to understand that the new casino jurisdictions tended to have one casino. Biloxi, which has a high concentration of casinos, differed both positively and negatively from the other communities studied. Since most of the communities had casinos for less than 10 years, the positive and negative impact may well change given a greater duration within the communities. The effects of casinos in a community were seen as quite varied, depending on a multitude of variables beyond the scope of this research. It was determined that the simple analyses and broad generalizations of this research are not sufficient to understand the complexity of what happens in communities when legalized casino gambling is introduced. Tables, appendices, references*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Iowa -- Sioux City

United States -- Missouri -- St. Joseph

United States -- Missouri -- St. Louis

United States -- Missouri -- St. Louis County

United States -- Illinois -- Alton

United States -- Illinois -- Peoria

United States -- Illinois -- East Peoria

United States -- Mississippi -- Biloxi

**Years Impacts Examined:** 1987-1997



**Impacts:** Social: Increased Positive Attitudes (most community leaders in the new casino jurisdictions believe that the casinos have been good for the communities, although 10% to 20% of the leaders saw casinos as a negative influence); Increased Crime (minor crimes are more likely to increase in casino communities than are the index offenses, although there is little consistency in types of crimes that significantly change when all the new jurisdictions are compared); Increase in Problem Gambling and Related Indices (significant increase in rate of personal bankruptcy found in five of seven communities; Suicide increased significantly in two casino communities, and significantly decreased in one.)

408. Stokowski, P. A. (1993). Undesirable lag effects in tourist destination development: A Colorado case study. *Journal of Travel Research*, 32(2), 35-41.

*Tourism planners often promise widespread community renewal as a product of tourism development, but benefits do not always occur as expected. A study analyzes undesirable "lag effects" associated with early stages of tourist destination development. Examples from 2 Colorado gaming towns - Central City and Black Hawk in Gilpin County - illustrate the problems; hypotheses formalizing relationships between temporal problems and community tourism development are derived. The developments in the 2 towns suggest that undesirable lag effects associated with community tourism growth are likely to appear in social and human services, which trail economic benefits.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Colorado -- Central City

United States -- Colorado -- Black Hawk

**Years Impacts Examined:** 1991-1993

**Impacts:** Economic: Increased Government Revenue (funds for State but not yet locally - though anticipated); Increased Business Failures (Hotel, gas station, and gift shop closures); Changes in Business Revenue (Rapid casino construction reduced activity in other business sectors; anticipated new business growth has as yet failed to occur.); Increased Infrastructure Costs (Local law enforcement, emergency services, and health care professionals have experienced increased service demands, but only limited funds are available to meet these needs.);

409. Stokowski, P. (1996). *Riches and regrets: Betting on gambling in two Colorado mountain towns*. Ninot, CO: University of Colorado Press.

*In Riches and Regrets, Patricia A. Stokowski traces the development of contemporary Gilpin County gambling from the proposal and campaign stage in 1989 and 1990, through the construction period leading to the opening of casinos in October 1991, and across several years of post-opening impacts. Combining critical historical perspectives with sociological analyses, Stokowski documents the economic, social, cultural, and institutional effects of the gaming development, concluding that gambling has produced mixed results for the Gilpin County towns. Because gambling is becoming increasingly popular as an economic development strategy in both rural and urban communities across the United States, this study can provide lessons for other communities seeking their own golden dreams at the card tables and slot machines.*

## **GOOD QUALITY**

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Colorado -- Central City

United States -- Colorado -- Black Hawk

**Years Impacts Examined:** 1991-1996

**Impacts:** Economic: Increased Government Revenue; Significant Increase in Property Value; No Impact on Business Revenue (there are significant economic benefits to specific groups -- notably property sellers, local governments, casino entrepreneurs, and the state of Colorado; significant redevelopment beyond the casino industry has not occurred)

410. Stokowski, P. A. (1996). Crime patterns and gaming development in rural Colorado. *Journal of Travel Research*, 34(3), 63-69.

*Opponents of casino development often claim that gambling development will lead to an increase in community criminal behavior. Crime levels before, during and after the initiation of gaming in 3 rural Colorado towns - Black Hawk, Central City and Cripple Creek - are examined. While totals have increased in some offense categories, crime is not proportional to the numbers of tourists visiting. It is not clear whether gaming behavior produces increases in crime or whether crime increases are simply the result of huge increases in tourist visits to towns. These data illustrate the complexity of competing claims about gaming impacts.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Colorado -- Black Hawk

United States -- Colorado -- Cripple Creek

United States -- Colorado -- Central City

**Years Impacts Examined:** 1989-1994

**Impacts:** Social: Increased Crime (total numbers of property crimes (larceny and theft, motor vehicle theft, and burglary) and one category of violent crime (aggravated assault) have increased substantially); total arrests in gaming counties also increased; tourist visits have increased faster than crime; not evident from these data whether gaming behavior produces increases in crime or whether crime increases are simply the result of huge increases in tourist visits to the towns)

411. Storer, J., Abbott, M. and Stubbs, J. (2009). Access or adaptation? A meta-analysis of surveys of problem gambling prevalence in Australia and New Zealand with respect to concentration of electronic gaming machines. *International Gambling Studies*, 9(3), 225-244.

*It is widely believed that greater availability of electronic gaming machines (EGMs) has led to increases in problem gambling prevalence and related harms. It has also been proposed that individuals and populations adapt to exposure over time and that prevalence rates plateau or decline, even in the face of increasing availability. This study examines both hypotheses using a combined data set of 34 problem gambling surveys conducted in Australia and New Zealand since 1991. Strong statistically meaningful relationships were found for an increase in prevalence with increasing per capita density of EGMs, consistent with the access hypothesis and supported by no evidence of plateauing of prevalence with increasing density of EGMs. A decrease in prevalence over time with availability held constant is also evident, partially consistent with adaptation. It is likely that both forces are at work simultaneously, with implications for appropriate policy responses to gambling harm minimisation.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Australia

New Zealand

**Years Impacts Examined:** 1991-2007

**Impacts:** Social: Increased Problem Gambling and Related Indices (strong statistically meaningful relationships between an increase in problem gambling prevalence and increasing per capita density of EGMs, at an average increase of 0.8 problem gamblers for each new EGM. Further, there is no evidence of plateauing of prevalence with increasing density of EGMs, one of the predictions of the adaptation thesis.)

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412. Strategic Partner Management Consulting (2005). *State of Ohio gaming market assessment. Prepared for The Greater Cleveland Partnership and Cincinnati Business Leaders*. Clarkston, MI: Strategic Partner Management Consulting.

*Two separate scenarios used in developing an assessment of the potential economic and fiscal impact of casino gaming on the State of Ohio.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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413. Swafford, W. A. (2006). *Estimating the economic effects of legalized casino gambling in Singapore*. United States -- Nevada: University of Nevada, Reno. M.A.

*On April 18, 2005, the Singaporean Government lifted a long standing ban of casino gambling, announcing that two casino licenses would be awarded. One casino license will be awarded for a casino to be constructed on Sentosa Island. The other license will be for a casino located at the Marina Bay. This thesis will attempt to answer the question of why the Singaporean government decided to legalize casino gambling after forty years of strictly prohibiting it. This thesis will then estimate the economic effects of legalized casino gambling on Singapore's economy, as well as estimate the costs of legalized casino gambling. This thesis will also discuss what the Singaporean government likely deems important in a casino operator, and estimate what attributes potential casino operators must possess to be awarded a license to operate a casino. This thesis will lastly provide estimations as to what issues of importance to both the Singaporean government and the casino operators may arise after the casinos are opened to the public in the estimated year of 2009.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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414. Tan, A. K., S. T. Yen, et al. (2010). Socio-demographic determinants of gambling participation and expenditures: evidence from Malaysia. *International Journal of Consumer Studies* 34(3): 316-325.

*This study examined the socio-demographic determinants of participation and expenditure decisions on gambling among non-Muslim households in Malaysia using data from the 2005–2006 Malaysian Household Expenditures Survey. Heckman's sample selection analysis was used to obtain consistent (unbiased) empirical estimates for the regression equation of gambling expenditures in the presence of censoring (observed zeros) in the dependent*

variable. Marginal effects were also calculated to further explore the effects of socio-demographic variables on the probability and levels of gambling expenditures. The results indicated that non-Muslim households in Malaysia who are more likely to participate and spend more in gambling include Chinese, affluent, male-headed, younger and non-white collar households. Specifically, households of Chinese descent have higher gambling probabilities and expenditures than Indians and those of other ethnic backgrounds. While education reduces and age increases the likelihood and expenditures of gambling among Chinese households, these effects are non-existent for Indians and other ethnic groups. Higher income and male-headed households were more likely to partake and have higher expenditures in gambling among all non-Muslim ethnic groups. Finally, Chinese and Indian households headed by a white-collar worker have lower gambling likelihoods and unconditional expenditures than their blue-collar cohorts. Based on these results, several anti-gambling policies were suggested to target those more likely to participate and spend more in gambling activities.

**Type:** Original Research; Secondary Analysis

**Gambling Format:** All gambling (primarily lotteries and horse racing)

**Location(s):** Malaysia

**Years Impacts Examined:** 2005 - 2006

**Impacts:** Social: Socioeconomic Inequality (the likelihood of gambling and its expenditures increase in tandem with incomes of Malaysian gamblers of all non-Muslim ethnicities)

415. Tanford, S. and A. F. Lucas (in press). The indirect impact of casual dining on low-end gaming in destination and local casinos. *International Journal of Hospitality Management*.

*The role of casino amenities is an important issue for casino operators and developers seeking to maximize gaming revenues, space utilization, and return-on-investment. The indirect impact of casual restaurant covers on low-denomination slot volume and cash table drop was investigated using daily data from two casinos. One casino primarily served local repeat customers while the other catered to a drive-in tourist business. Using estimates from time-series regression analysis, restaurant covers were significantly related to gaming volumes. The impact of dining volume on low-end slot play was especially strong in the local market casino, resulting in a substantial financial contribution.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 2009

**Impacts:** Economic: Business Revenue (In the local market, casual dining outlets would appear to be important amenities in the eyes of slot customers. Although local patrons have many other dining options, including eating at home or local restaurants, they may choose to visit the casino because it provides good food at a good price along with an enjoyable gaming experience. In the destination market, the restaurants may have served as a necessary amenity; however, the magnitude of the effect produced by the covers variable was noticeably less than that produced in the local market models.)

416. Task Force to Study the Impact of a Maine-based Casino (2002). *Final report of the Task Force to Study the Impact of a Maine-based Casino on the economy, transportation, infrastructure, state revenue and job market*. Augusta, ME: Office of Policy and Legal Analysis.

*During the course of its work, the Task Force recognized that any decision to legalize casino gambling in Maine is a major policy decision requiring extensive research and analysis. However, it should be noted that in spite of*

attempts of the National Gambling Impact Study sponsored by the federal government (see bibliography in Appendix T), they were unable to make definitive conclusions. This issue may not be a topic for quantitative analysis but rather a political judgment. The four meetings of the Task Force were not sufficient to provide the 121st Legislature and the people of Maine with a comprehensive report on the issues implicated by the legalization of casino gambling. The Task Force meetings generated more questions than answers. The Task Force is recommending to the Legislature and the people of Maine a framework for policy questions that must be addressed before the decision to legalize casino gambling is made. This framework may facilitate a detailed discussion of the issues regarding casino gambling. This framework poses many levels of questions, from broad policy issues to the details of the operation of such a facility.

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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417. Taylor, J. B. (2009). *Economic impact of the St. Regis Mohawk Tribe 2008*. Sarasota, FL: Taylor Policy Group.

*This report examines how one particular Native nation, the St. Regis Mohawk Tribe, participates in the economy of New York.*

**Type:** Original Research

**Gambling Format:** Casinos; Bingo; Indian Gaming

**Location(s):** United States -- New York -- Franklin County

**Years Impacts Examined:** 2003-2008

**Impacts:** Economic: Increased Government Revenue (the Tribe pays a quarter of its slot machine revenue to the State of New York); Increased Business Revenue (new spending on goods and services for casino and demand generated by casinos employees, etc.)

Social: Increased Employment (increased the Tribe's employment from 956 in 2003 to 1,336 employees in 2008; roughly 72% of the casino employees, 60% of the bingo employees are non-Indians.)

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418. Taylor, J. B. and Kalt, J. P. (2005). *Cabazon, the Indian Gaming Regulatory Act, and the socioeconomic consequences of American Indian governmental gaming: A ten-year review*. Cambridge, MA: Harvard Project on American Indian Economic Development.

*This study compiles 1990 and 2000 U.S. Census data on Native Americans residing on reservations and in designated Indian statistical areas in the lower 48 U.S. States. Gaming and non-gaming areas are compared to each other and to the U.S. as a whole. Data on fifteen measures ranging from income and poverty to employment and housing conditions indicate that, although substantial gaps remain between America's Native population and the rest of the U.S., rapid economic development is taking place among gaming and non-gaming tribes alike.*

## **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming—All Gambling

**Location(s):** United States

**Years Impacts Examined:** 1990; 2000

**Impacts:** Economic: Increased Infrastructure Investment (rapid economic development is taking place among gaming and non-gaming tribes alike); Increased Personal Income (From 1990 to 2000, family poverty rates dropped by seven percentage points or more in non-gaming areas, and by about ten percentage points in gaming areas.)  
Social: Increased Employment (Unemployment rates dropped by about two-and-a-half percentage points in non-gaming areas and by more than five percentage points in gaming areas.)

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419. Taylor, J. B., Krepps, M. B. and Wang, P. (2000). *The national evidence on the socioeconomic impacts of American Indian gaming on Non-Indian communities*. Cambridge, MA: John F. Kennedy School of Government, Harvard University.

*Based on statistical analysis of a national sample of 100 communities across the United States, 24 of which experienced the introduction of an Indian casino, we find that Indian casinos have substantial beneficial economic and social impacts on surrounding communities.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States

**Years Impacts Examined:** 1980-1997

**Impacts:** Economic: Increased Government Revenue (local tax revenue increase); Increased Business Revenue (Indian casinos seem to attract more new spending than they divert from existing businesses in the leisure and hospitality sectors in lower income areas); Increased Personal Income (Total income per capita and net earnings per capita increase slightly in non-Indian communities when an Indian casino is introduced nearby).  
Social: Increased Employment (reduced unemployment; 12% lower than non-gaming tribes); Increased Crime (slight increase in motor vehicle theft and robbery; but no effect for other forms)

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420. Taylor, W. S. (2001). *The economic and fiscal consequences of gaming in New Mexico*. United States -- New Mexico: The University of New Mexico. Ph.D.

*The introduction of Indian Gaming to New Mexico, beginning in late 1993, dominated the state's political agenda for the rest of the decade. Much of the political discourse centered on how Indian gaming affected state and local government-finances and the overall state economy. The purpose of this dissertation is to explore those questions. The dissertation, after a brief overview of the gaming industry in the United States and New Mexico, starts with an examination of the demographic characteristics and motivations of Indian gaming participants based upon a 1995 survey conducted by the University of New Mexico Public Policy Institute. It also uses this data to model gaming choice and expenditure. Theoretical fiscal implications of Indian gaming are analyzed mathematically. The mathematical model shows that the revenue sharing rates and compliance levels determine the fiscal consequences. It also shows that the net impact of any revenue sharing agreement are lower than the gross impacts as revenue gains from revenue sharing are partially offset by losses to the state's gross receipt tax base. Losses to the gross receipt base are tested econometrically. The overall impact of Indian gaming on the state economy is explored using the computable general equilibrium model developed by the economics department at the University of New Mexico for policy simulation purposes. The policy scenario tested is based upon reports as to the overall level of Indian gaming activity in 1996 and estimates as to the sources of gaming expenditures. Results suggest that the introduction of gaming has had a small, positive impact on the state's economy. The economic impact can be expected to grow as the industry grows and attracts more out-of-state dollars. Positive impacts may be partially or fully offset by the social costs associated with gambling, but this is left to future research.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos; Casinos

**Location(s):** United States -- New Mexico

**Years Impacts Examined:** 1995-1996

**Impacts:** Economic: Changes in Government Revenue (any revenue sharing from Indian casinos partially offset by losses to the state's gross receipt tax base)

421. Teske, P. and Sur, B. (1991). Winners and losers: Politics, casino gambling, and development in Atlantic City. *Policy Studies Review*, 10(2/3), 130-137.

*An analysis of numbers involved in casino gambling and economic development in Atlantic City, New Jersey, would suggest a prosperous city filled with satisfied, employed residents. Yet, in reality, Atlantic City presents a bizarre juxtaposition of glitzy, multimillion dollar casinos directly across the street from the worst of urban slums. Today, with more than \$6 billion worth of assessed property, it is the richest American city in real estate value per capita, and the most popular American tourist destination. The casinos have created 48,000 new jobs, more than the city's population. The benefits of this resurrection have been quite unevenly distributed, however, as many city residents are not better off than they were before gambling; the surrounding suburbs have done much better than the central city.*

**Type:** Secondary Analysis

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

422. Thalheimer, R. and Ali, M. M. (2004). The relationship of pari-mutuel wagering and casino gaming to personal bankruptcy. *Contemporary Economic Policy*, 22(3), 420-432.

*In this article, the relationship of the availability of pari-mutuel wagering and casino gaming opportunities to personal (nonbusiness) bankruptcy filings is investigated. An econometric model was developed relating the number of personal bankruptcies to sociodemographic, legal, and economic factors. In addition, a unique measure of access to casino and pari-mutuel gaming was included. Population, personal income, age, race, divorce rate, unemployment rate, and the ratio of debt to disposable personal income were found to be significant determinants of personal bankruptcies. Access to pari-mutuel or casino gaming facilities was found not to have a significant impact on personal bankruptcies.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Horse Racing (Pari-mutuel); Casinos

**Location(s):** United States -- Illinois

United States -- Iowa

United States -- Missouri

United States -- Mississippi

**Years Impacts Examined:** 1990-1997

**Impacts:** Social: No Impact on Problem Gambling and Related Indices (bankruptcy filings)

423. Thompson, W. N. (n.d.). *A casino for San Pablo: A losing proposition: An analysis of revenues and*

*expenditures for a proposed casino for San Pablo, California.*

*The report will analyze economic impact in two parts. The first will look at economic flows, including revenues brought into the casino (player losses), as well as casino expenses such as employment, advertising, building support, supplies, and state and federal taxes. The flows also include distribution of profits. The second analysis will consider the economic impact created by an increase in problem and compulsive gambling behavior due to the casino's opening.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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424. Thompson, W. N. (2000). *A casino's effects on the local economy: An economic analysis of the Industrial Avenue site as a casino venue for the United Auburn Indian Community.*

*The United Auburn Indian Community (UAIC), which has approximately 160 members, is seeking approval at the Bureau of Indian Affairs for a Class III gambling casino. Class III casinos are "Nevada" style casinos and include both slot machines and card tables. The proposed casino would be 200,000 square feet and located in southern Placer County, CA at Industrial Avenue and Athens Boulevard. The proposed casino site is approximately where the spheres of influence intersect for the three cities of Lincoln, Rocklin and Roseville in the state of California (map in Appendix F). In examining the potential economic effects of a casino on the communities surrounding the Industrial Avenue site it should be noted that the management company, Station Casinos, specializes in the cultivation and targeting of, local gamblers. The proposed casino at Industrial Avenue is not a destination resort style casino. This report also offers a comparative analysis of the potential impacts of locating a UAIC casino at an alternative site in Nyack that has been offered to the tribe by a developer. If a casino were located in Nyack it would be a destination style casino, which would include a hotel and other amenities. For a broad comparison of the two sites see the table in the appendix.*

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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425. Thompson, W. N., Gazel, R., and Rickman, D. (1995). *The economic impact of Native American gaming in Wisconsin. Wisconsin Policy Research Institute Report Volume 8, Number 3.* Milwaukee, WI: Wisconsin Policy Research Institute.

*An examination of the economic impact of Native American gaming on Wisconsin.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States -- Wisconsin

**Years Impacts Examined:** 1994



**Impacts:** Economic: Increased Business Revenue (areas around the casinos — within 35 miles — cumulatively enjoy a \$404.1 million net economic gain from the gaming revenue and other new visitor spending minus the outflow of money from the areas.); Increased Costs Related to Problem Gambling (a low estimate of the social costs of compulsive gamblers in the areas reduces the net gain to \$338.63 million); Increased Public Services (gains for communities with historical and current needs for social programs and economic development funding. The economic gains have assisted in achieving very positive community-growth projects, and they may continue to do so.)

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426. Thompson, W. N., Gazel, R. and Rickman, D. (1997). Social and legal costs of compulsive gambling. *Gaming Law Review*, 1(1), 81-89.

*This article reports an analysis of new data on the cost to society of compulsive gambling.*

**Type:** Original Research; Methodological Issues

**Gambling Format:** All Gambling

**Location(s):** United States -- Wisconsin

**Years Impacts Examined:** 1997?

**Impacts:** Economic: Costs Related to Problem Gambling (conclude that the annualized social costs for one serious problem gambler in Wisconsin amount to \$9,469.)

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427. Thompson, W. N., Gazel, R. and Rickman, D. S. (1999). Social costs of gambling: A comparative study of nutmeg and cheese state gamblers. *Gaming Research & Review Journal*, 5, 1-15.

*An analysis of the social costs of problem gambling finds similar results from two surveys of problem gamblers in treatment in Wisconsin (N=98) and Connecticut (N=112). Cost factors examined include lost work time and unemployment, bad debts, thefts, civil court costs, criminal justice system costs, and welfare costs. The problem gambler in Wisconsin imposes an annual cost of \$8,681 on other persons, while Connecticut costs amount to \$15,994. The variations between the two groups surveyed are found, for the most part, in costs of thefts. The differences can be explained by the fact that legalized gambling has been established longer in Connecticut.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** All Gambling

**Location(s):** United States -- Wisconsin

United States -- Connecticut

**Years Impacts Examined:** 1996; 1997

**Impacts:** Economic: Increased Problem Gambling (problem gambler in Wisconsin imposes an annual cost of \$8,681 on other persons, while Connecticut costs amount to \$15,994.)

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428. Thompson, W. N. , and Quinn, F. L. (1999). *An economic analysis of machine gambling in South Carolina. A report prepared in conjunction with Friends of South Carolina*. Columbia, SC: Education Foundation of the South Carolina Policy Council.

*Is machine gaming good for the economy of South Carolina? This is the question addressed in this report.*

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** United States -- South Carolina

**Years Impacts Examined:** 1999

**Impacts:** Economic: Increased Government Revenue (state imposes a \$2000 tax on each machine per year which is a gain for the state but approximately 50% loss for local area; also federal government sees extra revenue); Increased Regulatory Costs; Costs Related to Problem Gambling (We find that one compulsive gambler cost the full society \$1682 each year, government \$1479 each year and specific groups of others \$3137. Collectively, therefore, they each imposed costs of \$6299 onto other people each year. They also impose costs of \$13,566 upon themselves.)

429. Thompson, W. N. and Schwer, R. K. (2005). Beyond the limits of recreation: Social costs of gambling in Southern Nevada. *Journal of Public Budgeting, Accounting & Financial Management*, 17(1), 62-93.

*This study seeks to find the dollar value of social costs of gambling. The authors use data from a survey of 99 members of Gamblers Anonymous (GA) groups in southern Nevada. The GA members were asked many questions about their behavior while they were active gamblers, such as how often they missed work because of gambling, how much they borrowed because of gambling, how much they stole because of gambling and their experiences with the judicial system and welfare systems because of gambling. Societal costs of each behavior were calculated and annualized. It was determined that each of the compulsive gamblers imposed social costs of \$19,711 on others in southern Nevada. Of these costs, \$1,428 (7.2%) were governmental costs, while \$6,616 (33.6%) represented economic losses for southern Nevada. Using estimates of the numbers of pathological and problem gamblers in Nevada, it was determined that the overall social costs of compulsive and problem gambling in southern Nevada ranged from \$314 million to \$545 million per year.*

**Type:** Original Research

**Gambling Format:** All gambling

**Location(s):** United States -- Nevada

**Years Impacts Examined:** 2002

**Impacts:** Economic: Costs Related to Problem Gambling (compulsive gamblers imposed social costs of \$19,711 on others in southern Nevada.)

430. Toneatto, T., Ferguson, D. and Brennan, J. (2003). Effect of a new casino on problem gambling in treatment-seeking substance abusers. *Canadian Journal of Psychiatry*, 48(1), 40-44.

*Problem gambling rates are frequently found to be higher in those who abuse substances than in the general population, and this group represents a well-established high-risk population for developing the disorder. In this study of 853 residential substance abusers, approximately 10% scored in the problem gambling range on the South Oaks Gambling Screen (SOGS). On most descriptive variables, these subjects appeared to be similar to substance abusers who do not have gambling problems. However, they tended to participate in more gambling behaviours and had more relationships with individuals who also gambled. There is some evidence that the introduction of a new casino in the community increased the SOGS scores for subjects who gambled most frequently on such casino-related gaming as slot machines, cards, and casino games.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Canada -- Ontario -- Niagara Falls

**Years Impacts Examined:** 1996-1998

**Impacts:** Social: Increased Problem Gambling and Related Indices (some evidence suggesting that the presence of a new casino may be affecting gambling behaviour in this high-risk population of treatment-seeking substance abusers)

431. Topoleski, J. H. (2003). *The social and economic impact of Native American casinos*. United States -- Maryland: University of Maryland, College Park. Ph.D.

*In the late 1980s, a series of legal rulings favorable to tribes and the subsequent passage of the Indian Gaming Regulatory Act of 1988 legalized gaming operations on reservations in many states. Today, there are over 310 gaming operations run by more than 200 of the nations' 556 federally recognized tribes. Of these operations, about 220 are "Las Vegas" style casinos with slot machines and/or table games. To date, there has been little objective research completed investigating the impacts of Native American Casinos and no nationwide studies. This dissertation examines the impact of Native American casinos by studying all tribes in the lower 48 states. We use a simple difference-in-difference framework where we compare economic outcomes before and after tribes open casinos to outcomes over the same period for tribes that do not adopt or are prohibited from adopting gaming. We follow a similar structure to examine the impact of Indian casinos on the counties with and within 50 miles of an Indian casino. Four years after tribes open casinos, employment has increased by 26 percent, and tribal population has increased by about 12 percent, resulting in an increase in the employment to population ratio of five percentage points or about 12 percent. The fraction of adults who work but are poor has declined by 14 percent. Tribal gaming operations seem to have both positive and negative spillovers in the surrounding communities. In counties where an Indian-owned casino opens, we find that jobs per adult increase by about five percent of the median value. Given the size of tribes relative to their counties, most of this growth in employment is due to growth in non-Native American employment. The increase in economic activity appears to have some health benefits in that four or more years after a casino opens, mortality has fallen by 2 percent in a county with a casino and an amount half that in counties near a casino. Casinos do, however, come at some cost. Four years after a casino opens, bankruptcy rates, violent crime, and auto thefts and larceny are up 10 percent in counties with a casino. The impact on the number of welfare recipients and welfare transfers is less clear.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Indian Gaming -- Casinos

**Location(s):** United States

**Years Impacts Examined:** 1980-1999

**Impacts:** Economic: Increased Personal Income (The fraction of adults who work but are poor has declined by 14 percent)

Social: Increased Employment (increased by 26 percent, and tribal population has increased by about 12 percent, resulting in an increase in the employment to population ratio of five percentage points or about 12 percent.); Increased Public Health (health benefits in that four or more years after a casino opens, mortality has fallen by 2 percent in a county with a casino and an amount half that in counties near a casino); Increased Crime (Four years after a casino opens, bankruptcy rates, violent crime, and auto thefts and larceny are up 10 percent in counties with a casino).

432. Tsai, C. Y. and Y. C. Shiue (2010). The study of impacts and cognition for the attitude and intentions towards the Penghu casino industry development. *African Journal of Business Management* 4(1): 111-119.

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Taiwan

**Years Impacts Examined:** 2009

**Impacts:** Social: Public Attitudes (impacts of tourism do indeed affect the residents' attitudes towards the casino industry.). Note: casinos do not exist in this location at present.

433. Turner, N., Ialomiteanu, A. and Room, R. (1999). Checkered expectations: Predictors of approval of opening a casino in the Niagara community. *Journal of Gambling Studies*, 15(1), 45-70.

*Reports on the findings of a survey prior to the opening of a casino in Niagara Falls, Ontario (N = 1,002 adults) on approval of the casino, expectations regarding the impact of the casino, attitudes toward gambling, gambling behaviour, and demographic information. Ss generally had a positive attitude towards gambling. The expectations of community impact clustered into 3 factors: negative social consequences (crimes, addiction), negative environmental consequences (litter, noise, traffic), and positive economic consequences (jobs, stores, income). The majority of Ss expected economic benefits from the casino as well as a decrease in the environmental quality of the city. Expectations regarding social problems were mixed with a majority expecting an increase in serious crimes. Covariance structure modelling revealed that a positive attitude towards gambling and expecting economic benefits were positively related to approval of the casino, and expecting social problems was negatively related to approval. Given that more than 7 in 10 Ss supported the opening of the casino, the expected economic benefits coupled with a generally positive attitude towards gambling, apparently outweighed concerns about problems associated with gambling.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Canada -- Ontario -- Niagara Falls

**Years Impacts Examined:** 1999?

**Impacts:** N/A

434. UHY Advisors FLVS Inc. (2008). *Casino gaming in Massachusetts: An economic, fiscal & social analysis*. Boston, MA: Greater Boston Chamber of Commerce.

*In October 2007, Governor Deval Patrick proposed legislation that would legalize commercial casino gaming in the Commonwealth of Massachusetts. The draft legislation proposed by the Governor would allow for the development of up to three large destination-style casinos in different regions of the state. The Governor's proposal also specified the process by which casino developers would be selected and the minimum amount of licensing fees to be paid to the state by the developers. Following the announcement of the proposal, the Greater Boston Chamber of Commerce engaged UHY Advisors FLVS, Inc ("UHY") to conduct an independent analysis of the potential casino developments. Specifically, UHY was asked to examine the potential gross gaming revenues, new jobs created and the socioeconomic impacts associated with the legalization of casino gambling.*

**Type:** Scoping Study; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

435. United States General Accounting Office (2000). *Impact of gambling: Economic effects more measurable than social effects*. Washington, D.C.: United States General Accounting Office.

*Forty-eight states had some form of legalized gambling as of 1999. The estimated revenue from legalized gambling totaled more than \$54 billion in 1998. This report (1) examines the June 1999 findings of the National Gambling Impact Study Commission on the economic and social effects on communities and families and (2) explores issues raised by a case study involving Atlantic City, New Jersey, a gambling destination since the 1970s. GAO discusses the economic impacts of gambling, particularly on employment, bankruptcy, tax revenues, and community investment; the social effects of gambling; the prevalence of pathological gambling; and whether communities offer incentives to attract gambling establishments.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- New Jersey -- Atlantic City

**Years Impacts Examined:** 1985-1999

**Impacts:** Economic: Increased Government Revenue (federal, state, local tax revenue from gambling); Increased Public Services (funding from casinos for school taxes; property taxes; re-invested in community)

436. Vaillancourt, F. and Roy, A. (1999). *Gambling and governments in Canada, 1969-1998: How much? Who plays? What payoff?* Toronto: Canadian Tax Foundation.

*In this report, the authors present and analyze the empirical evidence on the significance of gambling in Canada. They measure the government revenues from gambling according to various indicators; they examine spending by Canadians on lotteries and gambling in general; and they estimate the costs and benefits of gambling to Canadians and Canadian governments in the 1990's.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** All Gambling

**Location(s):** Canada

**Years Impacts Examined:** 1990; 1995

**Impacts:** Economic: Increased Government Revenue (government gambling revenue = \$1.45-billion in 1990; \$3.45-billion in 1995; also, government revenue from gambling-related expenditure in 1995 of \$97-million); Costs Related to Problem Gambling (includes such factors as pathological gambling, crime-related costs, health-related costs, lost labour income and taxes, loss of welfare by non-gamblers)

Social: Increase in consumer surplus.

437. Victorian Commission for Gambling Regulation (2009). *Social and economic impact assessment: Ninth variation to the casino management agreement*. Melbourne, Australia: Victorian Commission for Gambling Regulation.

*The Minister for Gaming, the Honourable Tony Robinson MP, wrote to the VCGR on 25 August 2009 asking that it conduct a formal social and economic impact analysis of proposed amendments to the EGM taxation and table game arrangements for the Melbourne Casino, proposed in the Casino Legislation Amendment Bill 2009 before the Victorian Parliament at that time. In particular, the VCGR was asked to produce a report providing: (i) social and economic impact analysis of the negotiated outcome, particularly with respect to the variation to table game arrangements; and (ii) a broad financial assessment of the impact of the arrangements on the State and Crown. The VCGR's analysis with respect to these matters is contained in this report.*

**Type:** Scoping Study  
**Gambling Format:** N/A  
**Location(s):** N/A  
**Years Impacts Examined:** N/A

**Impacts:** N/A

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438. Victorian Gambling Research Panel (2001). *Social and economic impacts of gaming: A framework for research*. Melbourne, Australia: Victorian Gambling Research Panel.

*The project had two research objectives. The first was the development of an analytical framework and associated indicators that would provide a model for the analysis and evaluation of the social and related economic impacts of gaming. The Terms of Reference called for the examination of gaming as opposed to gambling. Accordingly the emphasis is on Electronic Gaming Machines (EGMs) and casino activity although at times it has been necessary to draw on general gambling research. In developing the analytic framework attention was given to data collection, the multiple dimensions at which gaming impacts occur and the nature of the impacts at each level of data collection. The second objective was to critically analyse and evaluate the research projects in the 1998-99 Research Program of the Victorian Casino and Gaming Authority (the Authority) using the analytical framework developed.*

**Type:** Secondary Analysis; Methodological Issues  
**Gambling Format:** N/A  
**Location(s):** N/A  
**Years Impacts Examined:** N/A

**Impacts:** N/A

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439. Volberg, R. A. and Stuefen, R. M. (1991). *Gambling and problem gambling in South Dakota: A study of gambling participation and problem gambling and a statistical description and analysis of its socioeconomic impacts*. Vermillion, SD: Business Research Bureau, University of South Dakota.

*This document constitutes an inquiry into the economic and social impacts which can be traced to gaming activities in South Dakota. The Impacts examined in this study are limited to those which are quantifiable and are statistically recorded both before and after various gaming activities were first initiated. The methodology used herein is not micro in nature. For example, case by case analyses are not pursued. Economic and social factors, however, are treated on a county basis in all instances where such data is readily available. Any variations concerning the mix and intensity of gaming activity by county are analyzed. Sixteen of the largest counties in the state are identified and compared to each other as well as to the balance of the state.*

#### **GOOD QUALITY**

**Type:** Original Research; Secondary Analysis  
**Gambling Format:** Casinos; Lotteries; Indian Gaming -- Casinos; Electronic Gambling Machines (EGMs)  
**Location(s):** United States -- South Dakota  
**Years Impacts Examined:** 1987-1991

**Impacts:** Economic: Increase in Government Revenue (6.2% of state general revenue fund in 1991); Changes in Business Revenue (positive for eating/drinking establishments; negative impact on recreation and apparel sectors)  
Social: Increased Employment (addition of 2,500 jobs in associated businesses); Increase in Problem Gambling and

Related Indices (mixed results with respect to divorces, food stamp recipients, child neglect, etc.; bankruptcy rates increased in first two years post-gambling introduction)

440. von Herrmann, D., Ed. (2006). *Resorting to casinos: The Mississippi gambling industry*. Jackson, MS: University Press of Mississippi.

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States -- Mississippi

**Years Impacts Examined:** 1980-1998

**Impacts:** Economic: Increased Government Revenues (tax revenue continues to increase from year to year); Increased Business Revenue (casinos in counties that attract a high number of tourists have experienced general economic growth in terms of retail sales. In those counties where gaming is primarily a local activity, retail sales growth has remained at or below pre-casino levels.)  
Social: Increased Employment (casino counties that attract a high number of tourists show employment growth above the state average; the other casino gaming counties exhibit growth at, or below, the state average.)

441. Vong Chuk Kwan, F. and Glenn, M. (2005). Mapping resident perceptions of gaming impact. *Journal of Travel Research*, 44(2), 177-187.

*This article explores Macao residents' perceptions of the impact of gaming development at a significant time in Macao's long experience with gaming, just after the end in 2002 of the 70-year-old monopoly system for the gaming sector and the introduction of new casino operators into the market. Principal components analysis, cluster analysis, and analyses of variance were used to understand the dimensionality of perceptions of gaming impact and differences among subgroups of gender, age, income, educational background, and marital status. The results could help the authorities and gaming operators to understand the perceived costs and benefits to residents regarding different dimensions of gaming impact and to design appropriate promotional messages to reinforce or alter resident perceptions about gaming. The findings led to the conceptualization of a gaming impact perception matrix (GIPM), creating a perception typology based on cost-benefit perceptions of gaming development in different time periods. An attempt was made to apply the typology with current theories of tourism development.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Macau

**Years Impacts Examined:** 2003

**Impacts:** N/A

442. Vong, F. (2009). Changes in residents' gambling attitudes and perceived impacts at the fifth anniversary of Macao's gaming deregulation. *Journal of Travel Research*, 47(3), 388-397.

*This article follows on an earlier study conducted on Macao residents' gambling attitudes and behavior when the local gaming industry deregulated in 2002. The objective is to examine if gambling attitudes and behavior have changed in the lapse of five years as gaming becomes more accessible. Results show that the respondents in 2007 had developed a more conservative attitude toward gambling in general. The same trend was observed among players and nonplayers. Three factors of perceived gaming impacts were found to influence overall gambling*

*attitude. It was also found that table and slot games had increased in popularity and were replacing the more common forms of gambling prior to 2002. Implications for education, well-being of the society, public policies, and tourism destination theories are discussed.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** Macau

**Years Impacts Examined:** 2007

**Impacts:** Social: Increased Negative Attitudes (local residents' attitudes toward gambling have become more conservative just five years into gaming deregulation; perceived impact on economy, environment, and cost of living were significant in influencing overall gambling attitude. The 2007 respondents agreed that the economy had improved. However, they also felt that the environment had deteriorated and cost of living had increased. It is suspected that this may have led to more conservative attitudes toward gambling over time as improvement in economy may not have been able to offset a general decrease in purchasing power because of inflation and rocketing property prices.)

443. Walker, D. M. (1998a). Comment on "Legal gambling as a strategy for economic development". *Economic Development Quarterly*, 12(3), 214-216.

*Meir Gross argues there is no support for legalized gambling, yet consumers have cast many votes in favor of legalized gambling. His arguments represent gambling literature and many of them stem from biased or incomplete economic analysis. Gross's concerns for tax regressivity as a problem linked with legalized gambling are unwarranted.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

444. Walker, D. M. (1998b). *Sin and growth: The effects of legalized gambling on state economic development*. United States -- Alabama: Auburn University. Ph.D.

*This project is an analysis of the introduction of a new product and its resulting effects on state economic growth. There are two specific inquiries. First, does a new consumer product have an effect on economic growth? If so, does the economic growth depend on the extent to which the industry exports its product? These questions are addressed through empirical testing of the relationship between legalized gambling and state economic growth. Three industries are analyzed: casino gambling, lotteries, and greyhound racing. These three industries are used because the products were previously unavailable (before being legalized) and the industries vary with respect to their export ranges. Therefore, in a comparison of the three industries, both questions (above) may be addressed. A model is developed to apply Granger causality testing to panel data. Using data on state per capita income (as a proxy for economic growth) and gambling revenues, the relationship between each of the gambling industries and economic growth is tested. The model leads to new and important empirical evidence for the debate over legalized gambling. More generally, the model permits the assessment of whether or not the introduction of a new good into an economy spurs economic growth. The empirical results suggest that, contrary to the views of many researchers, exports are not crucial for economic growth to result. There is also evidence, however, that exports can help spur economic growth. More generally, a comparison of the empirical results for the three industries suggests that the*



*introduction of a new good into consumers' choice set not only increases welfare, it is also an engine for economic growth.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Lotteries; Dog Racing

**Location(s):** United States

**Years Impacts Examined:** 1970-1996

**Impacts:** Economic: Increased Business Revenue (introduction of a new good into consumers' choice is an engine for economic growth; casinos and dog racing much more so than lotteries)

445. Walker, D. M. (1999). Legalized gambling and the export base theory of economic growth. *Gaming Law Review*, 3(2/3), 157-163.

*When considering the economic effects of legalized gambling, it is imperative to have an understanding of growth theory. Exports and imports can be important in a region's growth. However, an industry need not export to have a positive effect on economic growth. A region—like a firm or an individual—may experience economic growth from numerous sources, including imports, capital inflows, and more generally, increased transaction or velocity of spending.*

**Type:** Secondary Analysis; Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

446. Walker, D. M. (2003a). Methodological issues in the social cost of gambling studies. *Journal of Gambling Studies*, 19(2), 149-184.

*The appropriate way to classify and measure the "social costs" of gambling is a very important, unresolved methodological issue that has been addressed by Collins and Lapsley (2000); Thompson, Gazel, and Rickman (1999); and Walker and Barnett (1999), among others. What should be included and excluded from social cost studies continues to be a controversial issue, as illustrated in the literature and recent conferences. This paper is an attempt to explain the "economics" conception of social costs in accessible language. By using a simple economic model and everyday examples, it shows that the economics methodology is better than the other methodologies currently available. There are four specific goals of the paper: (1) Discuss the importance of the social cost methodological debate and the state of research in the area; (2) Explain the Walker-Barnett definition of social cost in the context of a simple production possibilities frontier and indifference curve model; (3) Use simple illustrative examples to show why many of the alleged social costs should not be classified as such; and (4) Suggest a new method for analyzing the social costs and effects attributable to pathological gambling.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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447. Walker, D. M. (2003b). *Review of Schwer, Thompson & Nakamuro "Beyond the limits of recreation: Social costs of gambling in Las Vegas"*. Prepared for the Nevada Resort Association. Las Vegas, NV: Nevada Resort Association.

*This is a review of the Schwer, Thompson & Nakamuro report (STN), which estimated the total social costs in Las Vegas from problem and pathological gambling at \$301 - \$470 million per year. Several methodological problems undermine their results.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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448. Walker, D. M. (2004). Kindt's paper epitomizes the problems in gambling research. *Managerial and Decision Economics*, 25, 197-200.

*For many readers, the casino gambling issue of Managerial and Decision Economics will be their first exposure to economic research on casino gambling. Based solely on a reading of the MDE issue, one might get the impression there is overwhelming evidence that legal casino gambling is 'bad.' But readers should be skeptical of what they read, as there is no such consensus in the literature. Indeed, the literature is fraught with methodological problems and inconsistencies. Professor Kindt's article (2001), in particular, exemplifies some of the problems that have been plaguing gambling research since the mid-1990s. Ordinarily, a reaction to an article like Kindt's would be unwarranted, since many of his arguments are supported only by newspaper articles. However, it is perhaps worthwhile to point out a few of the problems with Kindt's work, and with gambling research in general, so that research can advance, instead of digressing, as it has with the publication of the special issue of MDE. My comments focus on three issues in Kindt's paper.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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449. Walker, D. M. (2007). *Economics of casino gambling*. New York: Springer.

*Casino gambling has spread throughout the world, and continues to spread. As governments try to cope with fiscal pressures, legalized casinos offer a possible source of additional tax revenue. But casino gambling is often controversial, as some people have moral objections to gambling. In addition, a small percentage of the population may become pathological gamblers who may create significant social costs. On the benefits side, casinos are often purported to spur economic growth (increases in GDP), employment, and tax revenues. However, these benefits have been questioned. Does casino expansion simply "cannibalize" other industries, having no net effect? Or does casino gambling have significant positive economic impacts? The Economics of Casino Gambling is a comprehensive discussion of the social and economic costs and benefits of legalized gambling.*

**Type:** Original Research; Secondary Analysis; Methodological Issues

**Gambling Format:** Casinos; Lotteries; Dog Racing

**Location(s):** United States

**Years Impacts Examined:** 1970-1996

**Impacts:** Economic: Increased Government Revenue; Increased Business Revenue (legalized gambling has a positive impact on state-level economic growth)

450. Walker, D. (2008a). Clarification of the social costs of gambling. *Journal of Public Budgeting, Accounting & Financial Management*, 20(2), 141-152.

*As U.S. states and countries around the world consider legalizing casino gambling, the social costs of gambling continue to be hotly debated. This paper examines the social cost issue from a welfare economics perspective, and discusses the 2005 paper by Thompson and Schwer, published in this Journal. Their article exhibits a number of problems common in gambling research, including a flawed conception of social costs and a variety of measurement errors. For example, Thompson and Schwer count many costs borne by individuals as "social costs." In addition, many of their cost estimates appear to be arbitrary. As a result, the Thompson and Schwer social cost estimate is likely a serious overstatement of the actual costs.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

451. Walker, D. M. (2008b). Do casinos really cause crime? *Econ Journal Watch*, 5(1), 4-20.

*A comment on: Earl L. Grinols and David B. Mustard, "Casinos, Crime, and Community Costs," The Review of Economics and Statistics 88(1), February 2006: 28-45.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

452. Walker, D. M. (2008c). *Challenges that confront researchers on estimating the social costs of gambling*. Washington, DC: American Gaming Association.

*The social cost of gambling has been at the center of the debate over legalized casino gambling since the mid-1990s. Even now, more than a decade later, little progress has been made in researchers' ability to adequately identify and measure the potential costs of legalized gambling. There are a number of reasons for this lack of significant progress: (1) comorbidity, (2) survey data validity, (3) government expenditures and (4) the counterfactual scenario. Until researchers can address these issues, empirical estimates of the social cost of gambling will continue to be arbitrary. The goal in writing this paper is to provide future researchers, as well as policymakers and voters, with an understanding of the basic problems inherent in research on the social cost of*

gambling.

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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453. Walker, D. M. (2008d). *Issues to consider in implementing the "Socio-Economic Impact of Gambling (SEIG) Framework": Prepared for the Canadian Gaming Association.*

*In February 2008, "The Socio-Economic Impact of Gambling (SEIG) Framework, An Assessment Framework for Canada: In Search of the Gold Standard" was released. The purpose of the report is to introduce an alternative approach to identifying and measuring the socioeconomic impacts of gambling. The SEIG framework provides an important contribution to a critical area of gambling research. However, like other methodologies that attempt to address the socio-economic impacts of gambling, the SEIG framework has its own potential limitations. Policymakers, researchers, and research/government funding agencies should consider some of these issues as they contemplate research undertaken in the context of the SEIG framework. This paper discusses eight issues to consider in evaluating the SEIG framework:*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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454. Walker, D. M. and Barnett, A. H. (1999). The social costs of gambling: An economic perspective. *Journal of Gambling Studies*, 15(3), 181-212.

*Explains the economic perspective on social costs. An understanding of this paradigm removes the subjectivity in the classification of pathological gambling's social costs. The paper has three major components. First, the authors introduce the economic notion of social costs. Using this paradigm, the authors differentiate between the "true" social costs related to pathological gambling, and other negative consequences that cannot legitimately be classified as social costs. Second, the authors evaluate a recent social cost study using the economics social cost paradigm. Third, the authors discuss two types of social costs that have been largely overlooked in the gambling literature.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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455. Walker, D. M. and Barnett, A. H. (1999). Response to McGowan's comment on "The social costs of gambling:

An economic perspective". *Journal of Gambling Studies*, 15(3), 217-221.

*Replies to the comment by R. McGowan concerning the article by Walker and Barnett discussing the social costs of pathological gambling. The authors believe that McGowan draws attention to an important issue, the appropriate criteria for policy espousal, and alludes to another important issue, the proper role for government in society. The authors state that while these issues are important, they are not the subject of their paper and they are not central to the specific issues the authors address.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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456. Walker, D. and Eadington, W. R. (2006). *The potential economic benefits of casino gaming in Taiwan.*

*This paper provides a general discussion of the potential economic benefits of introducing casino gambling on Penghu Island, Taiwan, with references to the experiences with casino gambling in other countries.*

**Type:** Methodological Issues; Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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457. Walker, D. M. and Jackson, J. D. (2007). Do casinos cause economic growth? *The American Journal of Economics and Sociology*, 66(3), 593-607.

*Casino gambling is a popular form of entertainment and is purported to have positive effects on host economies. The industry surely affects local labor markets and tax revenues. However, there has been little evidence on the effects of casino gambling on state economic growth. This paper examines that relationship using Granger-causality analysis modified for use with panel data. Our results indicate that there is no Granger-causal relationship between real casino revenues and real per capita income at the state level. The results are based on annual data from 1991 to 2005. These findings contradict an earlier study that found that casino revenues Granger-cause economic growth, using quarterly data from 1991 to 1996. Possible explanations for the differences in short- and long-run effects are discussed.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Colorado

United States -- Illinois

United States -- Indiana

United States -- Iowa

United States -- Louisiana

United States -- Michigan

United States -- Mississippi

United States -- Missouri

United States -- Nevada  
 United States -- New Jersey  
 United States -- South Dakota

**Years Impacts Examined:** 1991-2005

**Impacts:** Economic: No Impact on Business Revenue (Our results indicate that the casino industry does not have an impact on economic growth at the state level. This is based on annual data from 1991 to 2005. These results contradict results from an earlier study that used quarterly data from 1991 to 1996. Together, these results may indicate that casino gambling has initial positive growth effects but that these die out over time.)

458. Walker, D. M. and Jackson, J. D. (1998a). New goods and economic growth: Evidence from legalized gambling. *Review of Regional Studies*, 28(2), 47-69.

*We address two questions: (1) Does legalized gambling spur economic growth? and, if so, (2) Does economic growth depend on "exports"? After developing a method of applying Granger causality to panel data, we analyze the casino gambling and greyhound racing industries. Empirical results suggest the answer to (1) is "yes". Both industries Granger cause economic growth. Because of the industry-wide results, the alleged "factory-restaurant dichotomy" for casino gambling does not appear to be valid. Based on the disparate thresholds and ranges of the industries and the consistent causal results (both industries Granger cause per capita income) the answer to question (2) appears to be "no."*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Dog Racing

**Location(s):** United States -- Colorado

United States -- Illinois

United States -- Indiana

United States -- Iowa

United States -- Louisiana

United States -- Mississippi

United States -- Missouri

United States -- Nevada

United States -- New Jersey

United States -- South Dakota

**Years Impacts Examined:** 1978-1996

**Impacts:** Economic: Increased Business Revenue (adding a new good does spur state economic growth)

459. Walker, D. and Jackson, J. (2008b). Do U.S. gambling industries cannibalize each other? *Public Finance Review*, 36(3), 308-333.

*Many states facing recent fiscal crises have looked to legalized gambling in an attempt to ease fiscal constraints. Although there has been some research on the economic effects of gambling, no study has offered a comprehensive analysis of the inter-industry relationships of lotteries, casinos, horse racing, and greyhound racing. In this article, we use seemingly unrelated regression (SUR) estimation to analyze the relationships among gambling industries in the United States. Our results indicate that some industries "cannibalize" each other (e.g., casinos and lotteries, and horse and dog racing), whereas other industries help each other (e.g., casinos and horse racing, dog racing and lotteries, and horse racing and lotteries). The study also examines the effects of adjacent-state gambling and a variety of demographic variables. This analysis provides a foundation for further research on how to optimize tax*

revenues from legalized gambling.

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries; Casinos; Horse Racing; Dog Racing

**Location(s):** United States

**Years Impacts Examined:** 1985-2000

**Impacts:** Economic: Change in Business Revenue + Increase in Business Revenue (The results suggest that horse and dog racing are substitutes for each other; Lotteries and casinos are negatively related; Lotteries do not, however, appear to cannibalize the racing industries; Generally, we find that the availability of a type of gambling in adjacent states will harm that industry in the state in question; Some of our results are not intuitive. For example, casinos and horse racing help each other, but casinos and dog racing harm each other. Indian casinos tend to complement casinos and horse racing, but harm lotteries. These results may be due to the peculiarities in certain states that exert significant influence in the overall model.)

460. Walker, D. and Jackson, J. (2011). The effect of legalized gambling on state government revenue. *Contemporary Economic Policy*, 29 (1), 101-114.

*Legalized gambling is an attractive option to state governments facing tightening fiscal constraints. Yet the empirical evidence on the effect of gambling on state revenues is limited. Most studies examine a single industry in a single state, and for a relatively short period of time. This study provides a more general analysis of gambling industries and their effects on state revenues. We use data on gambling volume and state government revenues net of federal government transfers for all 50 states from 1985 to 2000. We find that lotteries and horse racing tend to increase state revenues, while casinos and greyhound racing tend to decrease state revenues.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries; Casinos; Horse Racing; Dog Racing

**Location(s):** United States

**Years Impacts Examined:** 1985-2000

**Impacts:** Economic: Change in Government Revenue (lotteries and horse racing increase it while casinos and dog racing decrease it).

461. Walkoff, N. E. (1993). *The impact of legalized casino gambling on regional economic development: The case of Atlantic City*. United States -- Nevada: University of Nevada, Las Vegas. M.S.

*In 1976, Atlantic City was facing a situation whereby, as the city was experiencing economic decline, casino gambling became an option that could help the city become revitalized. Even though many questions accompanied this option, Atlantic City did pass a referendum to legalize casino gambling. This thesis illustrates both the benefits and costs that come from casino gambling. By using a hypothetical city as our model, we can explain the impact that casino gambling has on a city. After developing assumptions from our hypothetical model, we can compare these to the actual evidence of the results in Atlantic City. It can be shown that legalized casino gambling is a valid means of economic revitalization. However, there are some costs and other factors that might hinder a city's decision to legalize casino gambling. This thesis will evaluate these results and will help determine the regional economic value of instituting legalized casino gambling.*

**Type:** Original Research; Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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462. Wall, M., Peter, M., You, R., Mavoa, S., Witten, K. (2010). *Problem Gambling Research: A study of community level harm from gambling: Phase one Final Report: Report to Ministry of Health*. Auckland, New Zealand, Centre for Social and Health Outcomes Research and Evaluation & Te Ropu Whariki.

*This report outlines the first phase of a project funded by the Ministry of Health that aims to identify and ameliorate the effects of gambling on communities. The first phase of the research comprised two components both of which required analyses of routine or administratively collected data: The aims of the two components were to: i) Derive indicators of community harm and assess the relationship between the indicators and community-based gambling opportunities. ii) Measure the extent to which funds spent on gambling return to their community of origin through charitable or community development grants.*

**GOOD QUALITY**

**Type:** Original Research

**Gambling Format:** EGMs

**Location(s):** New Zealand

**Years Impacts Examined:** 2006

**Impacts:** Economic: No Change in Property Values (There was no significant relationship between gambling exposure and the number of property sales or property prices.)

Social: Increased Crime (Higher exposure to gambling opportunities was significantly linked to higher crime rates for all categories of crime investigated.); Decrease in Social Capital (For urban areas a higher density of gaming machines within 5000m of the CAU was significantly associated with worse perceptions of a community's social capital. People had lower levels of trust, less sense of belonging, rated community cohesion as lower and had worse relationships with others.). Quality of Life (The measures of gaming machine density were either not significantly related to measures of schooling outcome or had the opposite effect than hypothesized (i.e. worse schooling outcomes were associated with lower density)); Public Services (Given the lack of information available on grants, particularly what the grants are for, and the difficulty of obtaining information from grant recipients it is difficult to reach firm conclusions as to whether a particular area is a net gainer or loser from gambling expenditure.)

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463. WEFA Group, ICR Survey Research Group, Lesieur, H. T., and Thompson, W. (1997). *A study concerning the effects of legalized gambling on the citizens of the State of Connecticut. Prepared for State of Connecticut Department of Revenue Services Division of Special Revenue*. Eddystone, PA: WEFA Group.

**GOOD QUALITY**

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries; Horse Racing -- Pari-Mutuel; Horse Racing -- Off Track; Charitable Gambling; Casinos; Indian Gaming -- Casinos

**Location(s):** United States -- Connecticut

**Years Impacts Examined:** 1991-1996

**Impacts:** Economic: Increased Government Revenue (positive \$420M to State in FY1996); Increased Public Services (\$18M in charitable revenue in FY1996); Changes in Business Revenue (casinos negatively impacted pari-mutuel betting)

Social: Increased Socioeconomic Inequality (lottery spending regressive); Increased Crime (increase in crimes -- especially property crime -- related to casino introduction but attributable to increase in visitor numbers); No Impact on Problem Gambling (pathological gambling as percentage of population has remained steady over time)



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464. Weinstein, D. and Deitch, L. (1974). *The impact of legalized gambling: The socio-economic consequences of lotteries and off-track betting*. New York: Praeger

*This report is the product of a six-month effort to identify and evaluate the socioeconomic consequences of the most recent forms of legalized gambling in America - state lotteries and off-track betting on horse races.*

**Type:** Original Research; Methodological Issues

**Gambling Format:** Lotteries; Horse Racing -- Off Track

**Location(s):** United States

**Years Impacts Examined:** 1972-1973

**Impacts:** Economic: Increased Government Revenue (unlikely to be significant sources of revenue in relation to total revenues; provide additional funds as an alternative to tax increases; must be weighed against potential revenues lost in other tax areas); Increased Public Services (earmarking of lottery revenues does not necessarily result in a net addition of funds to the designated areas of expenditures)

Social: Increased Socioeconomic Inequality (regressively of lotteries and OTB); Decreased Crime (OTB reduced volume of illegal horse race betting); No Impact on Crime (lotteries and OTB have not significantly reduced total volume of illegal gambling)

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465. Welte, J. W., Barnes, G. M., Tidwell, M.-C. O. and Hoffman, J. H. (2009). Legal gambling availability and problem gambling among adolescents and young adults. *International Gambling Studies*, 9(2), 89-99.

*A national US telephone survey was conducted with 2274 respondents aged 14–21. The number of types of legal gambling operating in the respondent's state was positively related to the odds of lifetime gambling, current gambling, current frequent gambling and current problem gambling. For respondents aged 18–21, odds of current problem gambling, as opposed to never gambling, increased 39% for each additional type of legal gambling. The number of types of gambling in which a respondent was old enough to participate legally had a positive relationship to gambling involvement, including problem gambling. Being old enough to participate in specific forms of gambling was positively related to the frequency of playing those specific types. It was concluded that a greater number of types of legal gambling, as well as being old enough to legally play a greater number of types of gambling, is associated with a greater likelihood of problem gambling.*

**Type:** Original Research

**Gambling Format:** All Gambling

**Location(s):** United States

**Years Impacts Examined:** 2005-2007

**Impacts:** Social: Increased Problem Gambling and Related Indices (States with the most forms of legal gambling tend to have the highest youth gambling involvement and highest rates of youth problem gambling. This is likely to be partially a direct effect of the availability of gambling opportunities.)

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466. Welte, J. W., Wieczorek, W. F., Barnes, G. M., Tidwell, M.-C. and Hoffman, J. H. (2004). The relationship of ecological and geographic factors to gambling behavior and pathology. *Journal of Gambling Studies*, 20(4), 405-423.

*The current study examined the effect of neighborhood disadvantage and gambling availability on gambling*

*participation and pathology. A national telephone survey included 2631 US adults. Census data was used to characterize the respondent's neighborhood, and the distance from the respondent's home to gambling facilities was calculated. Logistic and linear regressions were performed to predict gambling participation and pathology. Results showed that the neighborhood disadvantage was positively related to frequency of gambling and problem/pathological gambling. The presence of a casino within 10 miles of the respondent's home was positively related to problem/pathological gambling. The permissiveness of gambling laws was positively related to any gambling in the past year, as well as frequent gambling. These results were interpreted to mean that the ecology of disadvantaged neighborhoods promotes gambling pathology, and that availability of gambling opportunities promotes gambling participation and pathology.*

**Type:** Original Research

**Gambling Format:** Casinos

**Location(s):** United States

**Years Impacts Examined:** 1999-2000

**Impacts:** Social: Increased Problem Gambling and Related Indices (Those who live within 10 miles of a casino have twice the rate of pathological or problem gambling as those who do not. The most straightforward explanation for this relationship is that the availability of an attractive gambling opportunity can lead to gambling pathology in some people who would not otherwise develop it. There are, of course, other possible explanations; Some effect of the permissiveness of state gambling laws was also found.)

467. Wenz, M. (2006). *Casino gambling and economic development*. United States -- Illinois: University of Illinois at Chicago. Ph.D.

*This dissertation examines the economic impact of casino gambling. The dissertation proceeds in three main parts. First, the impact of casinos on housing prices is estimated. Second, the casino location decision is formally modeled. Finally, a matching estimator is constructed to assess the impact of casinos on key economic variables. Casinos are associated with approximately two percent higher house prices in regions where they are located when controlling for other observable characteristics. This is due in to the non-random nature of the location decision. The increase in house prices depends inversely on population density, with the positive relationship disappearing as density increases. A variety of factors influence the casino location decision, and the factors are different for Native American and non-Native American casinos. Both types open in counties with large populations. Native American casinos are likely to locate in areas with many Native Americans, high levels of unemployed resources, and in areas with low voter resistance to gambling. Non-Native American casinos are likely to open near the Mississippi River and near other casinos. The casino location model is used to develop a propensity score that is used to match casino counties with non-casino counties to create a randomized experiment for measuring the effect of casinos on important economic variables. Native American casino counties show an increase in economic activity of around three percent to four percent in population, employment, and housing units, while no significant impact is found for non-Native American casinos. Neither type of casino has any significant impact on quality of life in either direction.*

**Type:** Original Research

**Gambling Format:** Casinos; Indian Gaming -- Casinos

**Location(s):** United States

**Years Impacts Examined:** 1990-2000

**Impacts:** Economic: No Impact on Personal income; No Impact on Property Values (Neither casinos or Native American casinos significantly affected house prices, rents)

Social: Increase in Employment (Native American casinos); No Impact on Quality of Life

468. Wenz, M. (2008). Matching estimation, casino gambling and the quality of life. *The Annals of Regional Science*, 42(1), 235-249.

*Little consensus exists in the literature as to the impact of casino gambling on regional economic development. This paper uses a propensity score matching estimator to assess the bottom line impact of casino gambling on the welfare of local residents. It extends the literature in two important ways. First, the traditional matching estimation model is extended to consider a kernel weighting formula that corrects for correlation between the outcome error term and characteristics of the regressors used in generating the propensity scores. Second, by using the matching procedure to control for selection bias in the casino location decision, this paper generates improved estimates for the impact of casino gambling on key economic variables and on local quality of life. Casinos are found to have no statistically significant net impact on the quality of life in their host counties, though Native American casinos do generate some additional economic activity in the form of increased population, employment, and housing starts.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos; Indian Gaming -- Casinos

**Location(s):** United States

**Years Impacts Examined:** 1990-2000

**Impacts:** Economic: Increase in Infrastructure Investment (Native casinos); No Impact on Personal Income; No Impact on Property Values

Social: Increase in Employment (Native casinos); No Impact on Employment (non-Native casinos)

469. Westfelt, L. (2002). *Internationella kasinon i Sundsvall och Malmö - Inställning, attityder och förväntade effekter [International casino in Sundsvall and in Malmö. Attitudes and expected effects]*. . Stockholm: SoRAD.

**Type:** Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

470. Westfelt, L. (2003). *Spelproblem i tre svenska orter – Resultat från 6000 intervjuer i Sundsvall, Malmö och Karlstad (Gambling problems in three Swedish communities – results from 6,000 interviews in Sundsvall, Malmö and Karlstad)*. SoRAD – Forskningsrapport nr 10. Stockholm.

-- Report Unavailable

**Type:** Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

471. Westfelt, L. (2004). *Kasinoetablering, spelvanor och spelproblem – Situationen före och efter etableringen av statliga kasinon i Sundsvall och Malmö [Casino establishing, gambling habits, and gambling problems -*

*The situation before and after establishment of state casinos in Sundsvall and Malmö]. SoRAD – Forskningsrapport nr 16. Stockholm.*

-- Report Unavailable

**Type:** Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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472. Westfelt, L. (2006). *Statliga kasinon i Sundsvall och Malmö -Förväntningar, erfarenheter, attityder, spelande och spelproblem före etableringen samt ett år och tre år efter [State casino in Sundsvall and Malmö - Expectations, experience, gambling and gambling problems before establishment and three and a half years after]. SoRAD Rapportserie, nr 32. Stockholm.*

-- Report Unavailable

**Type:** Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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473. Wetzel, C. (2006). Intratribal contention concerning Indian gaming: Implications for syncretic tribalism. *American Behavioral Scientist*, 50(3), 283-295.

*As Indian gaming operations proliferate and public deliberations concerning the propriety of casinos intensify, the academic literature devotes little attention to debates within tribes about Indian gaming. This article interrogates this divergence by examining a specific mode of intratribal contention. Gaming-related occupations staged by factions at the Keweenaw Bay Indian Community and the Kickapoo Traditional Tribe of Texas are described. After locating these practices in the context of approximately half a century of Native American contentious politics, the author considers four questions raised by these cases: (a) Does casino gaming, regardless of the class, have a place on the reservation? (b) How should communities manage the social and economic impacts of casino gaming? (c) Who is, and is not, a member of the community eligible to share in the benefits anticipated to be accrued through gaming? and (d) Who is "traditional" and what does traditional mean?*

**Type:** Original Research

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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474. Whaples, R. (2009). Gambling in America: Costs and benefits. *Review of Political Economy*, 21(2), 315-317.

*The article reviews the book "Gambling in America: Costs and Benefits," by Earl L. Grinols.*

**Type:** Methodological Issues  
**Gambling Format:** N/A  
**Location(s):** N/A  
**Years Impacts Examined:** N/A

**Impacts:** N/A

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475. Wheeler, B. W., Rigby, J. E. and Huriwai, T. (2006). Pokies and poverty: Problem gambling risk factor geography in New Zealand. *Health & Place*, 12(1), 86-96.

*Up to 2% of adults in New Zealand can be considered problem gamblers, where the activity has an impact on the well-being of those who gamble, and often their close associates. The most common activity involves non-casino gaming machines (NCGMs). This paper explores the geography of gambling 'opportunity' at small-area scales, and finds excess provision in those areas classified as highly deprived. Geographically weighted regression has been used to investigate the possibility that the degree of inequity in NCGM provision varies across New Zealand. As machines are licensed, this provides an opportunity for policy implementation towards risk reduction.*

**Type:** Original Research  
**Gambling Format:** Electronic Gambling Machines (EGMs)  
**Location(s):** New Zealand  
**Years Impacts Examined:** 2001

**Impacts:** Social: Increased Socioeconomic Inequality (gaming machines are disproportionately sited in the most deprived areas of New Zealand, potentially influencing or at least facilitating the development of problem gambling habits in those who can least afford them, and thus impacting adversely on wellbeing.)

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476. Wheeler, S., Round, D., Sarre, R. and O'Neil, M. (2008). The influence of gaming expenditure on crime rates in South Australia: A local area empirical investigation. *Journal of Gambling Studies*, 24(1), 1-12.

*Although there has been much speculation about the possible links between gambling and crime rates, relevant quantitative evidence has been practically non-existent in Australia to date. This paper reports the results of research that utilised a model designed to investigate the potential relationship between electronic gaming machine expenditures and property (income-generating) crime rates reported to police in local areas in South Australia in 2002–2003. The research found that the higher the expenditures on gaming machines in a particular local area per adult, the higher the income-generating crime rate in that area. No such relationship was found between gaming machine expenditure and non-income-generating crime rates. However, further research is required before any policy-relevant conclusions can be drawn.*

**Type:** Original Research; Secondary Analysis  
**Gambling Format:** Electronic Gambling Machines (EGMs)  
**Location(s):** Australia -- South Australia  
**Years Impacts Examined:** 2002-2003

**Impacts:** Social: Increased Crime (gaming machine expenditure was found to influence positively and significantly income-generating recorded crime rates in local areas in South Australia.)

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477. Whitaker, R. B. (2007). State lotteries and agency costs: Hidden costs to nonparticipants. *American Journal of Economics & Sociology*, 66(3), 533-544.

*Some nonparticipants support lotteries because they expect the lottery will shift a portion of their tax burden to participants. The principal-agent model suggests that lotteries will result in an above normal increase in state expenditures. This paper finds that 77 percent of net lottery proceeds are utilized for above normal spending increases, suggesting that tax benefits to nonparticipants are greatly diminished.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries

**Location(s):** United States

**Years Impacts Examined:** 1962-1996

**Impacts:** Economic: Increased Government Revenue; Increased Public Services (results of this paper suggest that implementation of a lottery is associated with higher than normal increases in state spending)

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478. Wiggins, L., Nower, L., Mayers, R.S., & Peterson, N.A. (2010). A geospatial statistical analysis of the density of lottery outlets within ethnically concentrated neighborhoods. *Journal of Community Psychology* 38(4): 486-496.

*This study examines the density of lottery outlets within ethnically concentrated neighborhoods in Middlesex County, New Jersey, using geospatial statistical analyses. No prior studies have empirically examined the relationship between lottery outlet density and population demographics. Results indicate that lottery outlets were not randomly dispersed across the county but rather were significantly clustered in some census tracts. Using geospatial statistical analysis, percent poverty was found to be negatively related to the density of lottery outlets, while percent commercial use was highly positively related. Percent Hispanic was strongly significant in all the models predicting lottery outlet density and had the highest explanatory power other than percent commercial. Other independent variables, including median household income and race (African American and White) were not found to be significant predictors of lottery outlet density. Implications for policy and research are discussed.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Lotteries

**Location(s):** United States – New Jersey

**Years Impacts Examined:** 2000

**Impacts:** Social: Socioeconomic Inequality (The results suggest that outlets are disproportionately clustered in mixed neighborhoods populated by Hispanics, irrespective of income level; the findings of this investigation indicate that there were fewer lottery outlets concentrated in African American neighborhoods, irrespective of level of commercial zoning.)

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479. Wilcox, D. (2005). *Dixon Downs horse racetrack and entertainment center project: Overview of social and cultural issues: Prepared for the City of Dixon, California*. Los Angeles, CA: Economics Research Associates.

*This report provides an overall compendium of the work conducted and the results which have been found from the indicators that were evaluated by Economics Research Associates.*

**Type:** Original Research; Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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480. Wiley, J. and Walker, D. (2009). Casino revenues and retail property values: The Detroit case. *The Journal of Real Estate Finance and Economics*, 16, 317-342.

*We analyze the effects of commercial casinos on retail property values in the Detroit urban area. Accounting for property characteristics and proximity to the casinos, casinos are found to have a significantly positive influence on retail property values. The effect is stronger within a 5-mile radius of the casinos, suggesting that casinos have a complementary, rather than substitution, effect on other businesses. This provides some of the first micro-level empirical evidence to support the "drawing power" of casinos and the impact of consumer spending on surrounding businesses. The model developed and tested in this study can be applied to other casino jurisdictions to gain further evidence on the impact of commercial casinos.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Michigan -- Detroit

**Years Impacts Examined:** 2001-2008

**Impacts:** Economic: Increased Property Value (The results indicate that casinos have a complementary effect on Detroit retail. An increase in casino revenues is associated with a statistically significant increase in retail property values. This effect is stronger in magnitude for properties within a 5-mile radius surrounding the commercial casinos. Restaurants, service stations and general freestanding retail are each identified as property types that appreciate in value when nearby casinos generate higher revenue flows.)

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481. Williams, R.J. (2011). A framework for assessing the socioeconomic impacts of gambling. In Y.D. Belanger (ed.), *First Nations Gambling in Canada: Current Trends and Issues*. Winnipeg, Manitoba: University of Manitoba Press.

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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482. Williams, R. J., Hann, B., Schopflocher, D., Wood, R. T., Grinols, E. and McMillen, J. (2011). *The Quinte Longitudinal Study*. Research project funded by the Ontario Problem Gambling Research Centre (Apr 1, 2006 – Feb 28, 2012). from <http://www.qeri.ca/>.

*In order to effectively prevent something, you need to know what causes it. Longitudinal research is the only way of understanding the critical junctures and precipitators that prevention efforts should be targeting--and in particular, which junctures appear earliest and thus provide the best opportunity for prevention. Longitudinal research to create an overarching etiological model of problem gambling is consistently identified as a top research need in the field. The Quinte Longitudinal Study began in 2006 with a sample of 4121 Ontario residents ages 17 to 89, including an oversample of 1056 'at risk' gamblers. These individuals have received a comprehensive annual*

assessment of all variables of epidemiological relevance to addictive behaviour and psychopathology (demographics; family history; physical health; gambling attitudes, gambling motivation and behavior; gambling availability; personality; stress; mental health status; social functioning and support; intelligence). No other longitudinal study of gambling comes close to the comprehensiveness and rigour of the QLS. The retention rate thus far achieved (94.2% after 4 years) is virtually unprecedented for large scale longitudinal research of psychopathology, and significantly enhances the scientific value of the project.

*Note: this project is also known as the 'Belleville Study' and the 'Quinte Exhibition and Raceway Impact Study'.*

**Type:** Currently Underway (Final Report expected in September 2011).

**Gambling Format:** Multiple Forms

**Location(s):** Canada – southeastern Ontario

**Years Impacts Examined:** 2006 – 2011

**Impacts:** N/A

483. Williams, R. J., Belanger, Y. D. and Arthur, J. N. (2011). *Gambling in Alberta: History, Current Status and Socioeconomic Impacts*. Final Report submitted to the Alberta Gaming Research Institute. Edmonton, Alberta. March 2011. From <http://research.uleth.ca/seiga/>

*At a provincial level, there would appear to be minor economic benefits to gambling in Alberta that are offset by minor economic costs. The main economic benefits concern the fact that gambling appears to create additional economic activity without any obvious negative impacts on other business, and gambling is associated with a very small increase in the value of infrastructure. At a community level, however, there are significant and unambiguous economic benefits to First Nation communities that host casinos because of their ability to retain a large part of the revenue. Although this increased revenue is mostly derived from non-First Nations communities (primarily Edmonton and Calgary), it represents a relatively small cost to these large urban economies. The economic costs of gambling in Alberta concern the fact that the creation of domestic gambling opportunities has more likely increased monetary outflow to out-of-province jurisdictions rather than retained it. However, the amount of outflow is small relative to overall Alberta GDP. It is also worth noting that the model used in Alberta whereby the provincial government and community groups are the primary beneficiaries of gambling revenue is a system that best ensures that gambling revenue stays in the province and the economic benefits accrue to Albertans. From a social/nonmonetary perspective, it can be said there are important social benefits of gambling in Alberta that are offset by some serious negative consequences. The main social benefit is the enhanced community services that Albertans receive from charity/community groups and maintained and/or enhanced public services from the provincial government. Other important social benefits are the fact that a) well-regulated legalized gambling has significantly decreased non-regulated illegal gambling, and b) gambling has provided an additional leisure option that is fairly well patronized. Legalized gambling also appears to provide minor employment benefits. Gambling's negative social impacts concern the fact that it is slightly regressive, and it creates a small amount of additional crime (that is offset to some extent by a significant decrease in illegal gambling). However, the main negative impact is problem gambling, which directly or indirectly affects 8% to 10% of the population and which involves particularly serious consequences for a small minority of these people (bankruptcy, divorce, unemployment, crime, suicide). For some of these things (bankruptcy, suicide) gambling appears to be an important contributor to their overall prevalence within Alberta. However, a) the legal availability of gambling is only partly responsible for the prevalence of problem gambling (i.e., problem gambling existed to some extent prior to legal provision and the relationship between legal gambling availability and problem gambling is relatively weak), and b) problem gambling is only partly responsible for these serious consequences (i.e., the comorbid conditions of problem gamblers are additional contributing factors). A more directly attributable and ethically problematic aspect of legal gambling is the fact the large majority of government and charity gambling revenue is derived from a very small percentage of the population which includes a disproportionate percentage of problem gamblers.*



**EXCELLENT QUALITY****Type:** Original Research**Gambling Format:** Multiple Forms**Location(s):** Canada -- Alberta**Years Impacts Examined:** 1970 - 2010

**Impacts:** Economic: Increased Government Revenue; Increased Public Services; Increased Infrastructure Value; Increased Regulatory Costs; No Impact on Business Starts; No Impact on Business Failures; No Impact on Business Revenue; No Impact on Property Values; Increased Problem Gambling Financial Costs.

Social: Increased Employment (very small); Increased Socioeconomic Inequality (small); Increased Leisure Options; Increased Negative Attitudes (although positive for community leaders); Increase in Crime (small); Increase in Problem Gambling & Related Indices (PG prevalence has positive but weak relationship with legal gambling availability; positive but weak relationship with consumer insolvencies); Decreased Subjective Well-Being (nongamblers somewhat more likely to be 'very happy').

484. Williams, R. J. and Wood, R. T. (2004). The proportion of gaming revenue derived from problem gamblers: Examining the issues in a Canadian context. *Analyses of Social Issues & Public Policy*, 4(1), 1-13.

*The legitimacy of government-sponsored gambling and its continued expansion depends in part on the impact that gambling has on society and the extent to which gambling revenue is derived from vulnerable individuals. The purpose of the present article is to try to establish a valid estimate of the proportion of gaming revenue derived from problem gamblers in Canada. Using recent secondary data collected in eight Canadian provinces, we estimate this proportion to be 23.1%, compared to a problem gambling prevalence rate of 4.2. This estimate must be seen as tentative, however, as self-reported expenditures are 2.1 times higher than actual provincial gaming revenues.*

**Type:** Original Research; Secondary Analysis**Gambling Format:** All Gambling**Location(s):** Canada**Years Impacts Examined:** 1996-2002

**Impacts:** Economic: Increased Socioeconomic Inequality (4.2% of Canadian problem gamblers account for 23.1% of gambling revenue).

485. Williams, R. J. and Wood, R. T. (2007). The proportion of Ontario gambling revenue derived from problem gamblers. *Canadian Public Policy*, 33(3), 367-387.

*The proportion of gambling revenue derived from problem gamblers is an important issue when considering the appropriateness of government-sponsored gambling. Figures obtained from prior research are tentative due to methodological problems and the mismatch between reported expenditures and actual gambling revenue. Using improved methods for assessing the prevalence of problem gambling and the accuracy of self-reported gambling expenditures, the present study estimates that the 4.8 percent of problem gamblers in Ontario in 2003 accounted for approximately 36% of Ontario gambling revenue. This proportion varied as a function of game type, with a lower proportion for lotteries, instant win tickets, bingo, and raffles, and a higher proportion for horse racing and slot machines.*

**Type:** Original Research**Gambling Format:** All Gambling**Location(s):** Canada -- Ontario**Years Impacts Examined:** 2003

**Impacts:** Economic: Increased Socioeconomic Inequality (4.8 percent of problem gamblers in Ontario in 2003 accounted for approximately 36 percent of Ontario gambling revenue. This proportion varied as a function of game type, with a lower proportion for lotteries, instant win tickets, bingo, and raffles, and a higher proportion for horse racing and slot machines)

486. Wilson, D. H., Gilliland, J., Ross, N. A., Derevensky, J. and Gupta, R. (2006). Video lottery terminal access and gambling among high school students in Montréal. *Canadian Journal of Public Health*, 97(3), 202-206.

*Gambling is a risky behaviour that involves uncertain financial outcomes, can be addictive, and has been associated with strongly adverse social and public health outcomes. We wanted to assess whether socio-economic and gambling-related opportunity environments of neighbourhoods affected the uptake of video lottery terminal (VLT) gambling among Montréal youth.*

**Type:** Original Research

**Gambling Format:** Electronic Gambling Machines (EGMs)

**Location(s):** Canada -- Quebec -- Montreal

**Years Impacts Examined:** 2002-2003

**Impacts:** Social: Increased Socioeconomic Inequality (High schools located in lower income and inner-city neighbourhoods have more video lottery opportunities within a short walk (500m or less) than high schools located in higher income and suburban neighbourhoods in Montréal.)

487. Wilson, J. M. (2001). Riverboat gambling and crime in Indiana: An empirical investigation. *Crime & Delinquency*, 47(4), 610-640.

*Despite the proliferation of river boat gambling, few studies have rigorously investigated a link between riverboat gambling and crime. Literature regarding routine activities theory and resort and traditional casino tourism suggests that offenses may increase with the enhanced opportunities for crime provided by the influx of gamblers. Focusing on Indiana communities, this study explored the connection by examining via interrupted time series analyses index offenses and simple assaults over 286 weeks in Hammond and index, driving under the influence, public intoxication, disorderly conduct, and prostitution offenses over 57 months in Rising Sun. The casinos were not found to increase crime in Hammond but were associated with increases in aggravated assaults and thefts in Rising Sun. These somewhat attenuated effects on crime suggest the enhanced criminal opportunity created by riverboat casinos did not increase the overall frequency of individual offenses as might be expected from routine activities theory and related tourism literature.*

**Type:** Original Research; Secondary Analysis

**Gambling Format:** Casinos

**Location(s):** United States -- Indiana -- Hammond

United States -- Indiana -- Rising Sun

**Years Impacts Examined:** 1992-1997

**Impacts:** Social: No Impact on Crime

488. Wood, R.T. & Williams, R.J. (2009). *Internet Gambling: Prevalence, Patterns, Problems, and Policy Options*. Final Report prepared for the Ontario Problem Gambling Research Centre,

Guelph, Ontario. January 5, 2009. <http://hdl.handle.net/10133/693>

**Type:** Original Research

**Gambling Format:** Internet Gambling

**Location(s):** Worldwide

**Years Impacts Examined:** 2006 - 2007

**Impacts:** Social: Increase in Problem Gambling & No Change in Problem Gambling (Prevalence of problem gambling is 3 to 4 times higher in Internet gamblers. While Internet gambling is an important contributing factor to gambling problems in a portion of problem gamblers, it does not appear to be the main cause of problem gambling for most of them. This is consistent with the notion that Internet gamblers are heavy gamblers to begin with who have simply added Internet gambling to their repertoire.)

489. Wynne, H. J. and Anielski, M. (2001). *The Whistler Symposium report: The first international symposium on the economic and social impact of gambling. September 23-27, 2000.* Whistler, BC: Whistler Symposium.

*The First International Symposium on the Economic and Social Impacts of Gambling, co-hosted by the Canadian Centre for Substance Abuse (CCSA), had as its primary goal the development of a concept paper or draft guidelines for estimating the social and economic impacts, costs and benefits of gambling.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

490. Wynne, H. J. and Shaffer, H. J. (2003). The socioeconomic impact of gambling: The Whistler symposium. *Journal of Gambling Studies*, 19(2), 111-121.

*Discusses the growth of legal gambling around the world and its socioeconomic impact and the government policy decisions and the dilemma it faces while legalizing gambling and recognizing it as another source of revenue. Despite the clear need for trustworthy policy-relevant information, governments have been slow to commission research that examines the socioeconomic impact of gambling in society. There is a paucity of research into the socioeconomic impact of gambling expansion. Much of the research that has been done is not scientifically rigorous. There is little agreement as to conceptual or analytical frameworks and methodologies that are best suited to guide cost-benefit analyses of gambling policy decisions. In this context the article discusses the Whistler Symposium, the first international symposium on the economic and social impact of gambling, held in Whistler, British Columbia, Canada from September 23-27, 2000. This symposium addressed the aforementioned research shortcomings and to begin the process of developing a conceptual framework and attendant methodologies to measure the socioeconomic impact of gambling in societies.*

**Type:** Methodological Issues

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

491. Yukon Council on the Economy and the Environment (1994). *Report of the Yukon Council on the Economy and the Environment on the introduction of video lottery terminals and expanded casino gambling in the Yukon*. Whitehorse, YK: Yukon Council on the Economy and the Environment.

**Type:** Scoping Study

**Gambling Format:** N/A

**Location(s):** N/A

**Years Impacts Examined:** N/A

**Impacts:** N/A

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492. Zagorsek, H. (2009). The impact of resort casino development on national economy: The case of Slovenia. *Transformations in Business & Economics* 8(3): 90-103.

**Type:** Scoping Study; Methodological Issues

**Gambling Format:** Casinos

**Location(s):** Slovenia

**Years Impacts Examined:** 2006?

**Impacts:** N/A