Gambling with Our Future?

The Costs and Benefits
of Legalized Gambling

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Contents

Executive summary

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. The principal findings are the following.

Problem gambling is not very prevalent

Within the adult Canadian population, "life time" pathological gambling is estimated at 1.6 percent and problem gambling at 3.85 percent. Past-year prevalence was estimated at 0.2 percent and 0.6 percent, respectively. In Canada, there is a higher percentage of social non-problem gamblers than social non-problem drinkers and there is a far greater percentage of the population with a drinking problem than with a gambling problem.

In Australia, approximately 0.5 percent of the adult population has a severe gambling problem, while another 0.6 percent is described as "at risk" for gambling problems. The recent American presidential commission report into the effects of legalized gambling put to rest many of the myths propagated about gambling. For example, it is estimated that approximately 2.5 million adults (0.8 percent) are pathological gamblers and 3 million adults (1.3 percent) are problem gamblers.

The number of compulsive gamblers in the United Kingdom is estimated at approximately one percent of the adult population. This is consistent with the estimated prevalence of pathological gamblers in Canada, the United States, and Australia.

The social benefits of gambling are underappreciated

Gambling may be considered a recreational outlet, similar to other entertainment and leisure products and services. Those who participate in gambling activities do so voluntarily and, in return, receive intrinsic benefits from their consumption. If consumers are gambling for entertainment purposes, they are purchasing gambling just as they would purchase cinema or symphony tickets. This may be considered a relatively harmless form of entertainment that provides a recreational outlet for participants.

Gambling may be exciting and socially engaging. For those who enjoy taking risks, the propensity for risk associated with gambling may be both stimulating and challenging. For others, gambling is stimulating due to the challenge of estimating potential wins and losses, especially with sports betting and horse racing. Overall, people gamble for a variety of reasons, whether for a break from their daily lives, the thrill of the chase, or the challenge of beating the odds. Every individual gambles for different reasons and will derive pleasure from the activity according to his or her own individual utility yardstick.

While most people tend to be risk-averse, there are those who are risk-preferring over certain income ranges, that is, they are willing to take a risk—to gamble—to increase their wealth. In other words, for those who choose to gamble, the small sum risked for the expected return of a large sum of money is justified by the opportunity of financial gain that a person would not have otherwise had the opportunity to obtain. Unfortunately, most gambling critics discount the enjoyment derived from games of chance and, instead, consider the anticipated monetary returns from gambling to be the most important outcome.

Within the gambling arena, there are opportunities for gamblers to gain esteem both in their own eyes and in the eyes of others, although they may be losing money. Through gambling, participants gain an opportunity to test their skill in games of chance, and derive intrinsic pleasure from the thrill of the activity itself. One of gambling's main attractions appears to be the entertainment value of the activity involved.

The social costs of gambling are overstated

Despite the relatively small number of cases of pathological gambling, there are social costs attributable to those people who are unable to control their gambling behaviours. The social costs of gambling may be defined more precisely within specific cultural contexts. In countries such as Australia, for example, a more tolerant attitude toward gambling may be reflected in a lower estimate of the social costs of gambling. In Canada, meanwhile, there has been comparatively little empirical research conducted into the social costs of gambling and, as a result, most of the evidence from Canada is anecdotal in nature. In the United States, increased public awareness about the effects of gambling has resulted in a number of studies that attempt to quantify its social cost. Despite these efforts, research from the United States also tends to be disproportionately qualitative in nature.

A social cost commonly attributed to gambling is that problem gamblers tend to have higher levels of debt and declare bankruptcy at higher rates than non-problem gamblers and non-gamblers. However, claims by gambling opponents that bankruptcy is a by-product of gaming activities are unfounded. A rise in the number of bankruptcy filings and increased gambling rates prompted the US Congress to investigate the link between gambling and bankruptcy. The Treasury Department, charged with reporting on the issue, found a statistically insignificant relationship between gambling and bankruptcy.

Australia tends to be at the forefront of gambling developments and gambling research. A 1995 study estimated the social costs of gambling (and pathological gambling in particular) to be considerably lower than the estimated social benefits produced by gambling.

The economic benefits of gambling
outweigh the economic costs

The most recent and comprehensive analysis of the economic costs and benefits of legalized gambling in Canada found that the net economic benefit was equivalent to $3.044 billion in 1995, up from $526 million in 1990. Government revenue derived from government-run lotteries, casinos, and VLTs increased from less than $100 million in 1970 to $1.3 billion by 1985, and reached a total of $6.8 billion in 1997. Between 1992 and 1997 (table 35), total gambling revenues for provincial governments grew from $1.7 billion to $3.8 billion. Overall, the portion of revenue derived from gaming activities also increased during this period.

It is estimated that the Australian gambling industry generates an annual producers' surplus of approximately AUS$5 billion and contributes approximately $5.5 billion annual to the nation's GDP. A recent American study demonstrates that gambling improves the overall socioeconomic health of the community in which the gambling occurs. The study concluded that the "casino effect" does not significantly increase either crime or bankruptcy. Casino proximity does, however, significantly increase per capita casino spending, income, and employment. Additionally, the study showed a decrease in the percentage of the labour force unemployed, the number of taxpayer dollars spent on welfare payments, and government transfer payments as a result of casino proximity. Furthermore, local economies with legalized gambling experienced growth in the construction trades, the hotel and hospitality industries, and the recreation and amusement sector.

A common misconception about gambling is the perceived association between gambling facilities and the incidence of crime. In Canada, both the actual number of felonies committed in this area and the rate of such crime have historically been very low but, in the early 1990s, the rate sank further, to record low levels. The sharp decline is related, at least in part, to the wider availability of legal gambling venues throughout the country.

One detailed analysis of the relationship between casinos and crime focused on ten American jurisdictions that have commercial casinos. According to these researchers, crime rates in Atlantic City have been in decline since 1982, despite a steady increase in gaming revenues. Meanwhile, despite a tremendous influx of tourists and a large population, Las Vegas has a lower crime rate and is safer than virtually every major American tourist venue. The evidence indicates that government regulation, in addition to facilitating the takeover of much of the industry by reputable private corporations, has eliminated organized crime from the direct ownership and operation of the casinos.

There is no evidence that casinos in Australia bring about more per-capita street crime nor even that crime rates increase in the immediate vicinity of casinos. It is found that the trend toward legalizing a greater variety of gambling activities and opening up the supply of gambling services to greater competition has probably served to nullify the crime and gambling link.

The British gambling industry is relatively crime-free and bettors, although offered numerous opportunities to break the law, generally do not. British gaming has enjoyed a reputation for honesty since 1968, when the Gaming Board was granted autonomous control over the gambling industry. One of the reasons that crime has been considered a direct consequence of gambling is that betting and gaming used to involve breaking

the law. Today, just as no serious commentator would suggest that casino gaming in the United States is directly associated with crime, there is great confidence that the criminal element is minimized in the British gaming marketplace.

Gambling's critics claim that those who experience problems with their gambling resort to criminal activities to finance their addiction. It is estimated that the arrests of problem and pathological gamblers (on an annualized, present-value basis) cost government US$960 and US$1,250, respectively. The estimated "lifetime" costs are approximately US$10,500 for pathological and US$5,100 for problem gamblers. Annual health-care expenditures increased by approximately US$750 per person for pathological gamblers. The estimated average cost of mental-health services per gambler (problem and pathological) is US$350 per year.

The cost of problem gambling is relatively small: about US$5 billion a year in legal fees for divorce, court, and jail costs for arrests, lost wages, and bankruptcy. That compares with costs of US$72 billion for smoking, US$166 billion for alcohol abuse, and US$71 billion for motor-vehicle crashes.

Gambling benefits Indian Reservations

Most of the available research on Indian gambling is from the United States. Consequently, this section focuses exclusively on the American Indian gambling experience. According to the National Research Council, "The recent institutionalization of gambling appears to have benefited economically depressed communities in which it is offered" throughout the United States. One of the most striking examples has been the tremendous improvement in various social indicators on Indian reservations.

Before the establishment of legal Indian gambling, many tribes experienced desperate conditions. Poverty and unemployment rates of Indian American tribes were the highest of any ethnic or racial group in the United States and per-capita income, education levels, rates of home ownership, and other social indicators were among the lowest. The growth of Indian gambling has stimulated the reservations' once stagnant economies, improving the social well-being of many Indian tribes.

Revenues derived from gambling operations have allowed many tribes to make unprecedented improvements in economic and social health. Gambling revenues are used to support many tribal government services, including tribal courts, law enforcement, fire protection, water, sewer, solid waste, roads, environmental health, land-use planning, and other social welfare programs. Indian gambling facilities provide approximately 100,000 jobs for tribal members in areas where unemployment rates often previously exceeded 50 percent of the adult population.

Internet gambling should be regulated
rather than prohibited

Unlike its southern neighbour, Canada has taken a more passive approach to regulating the Internet gaming market. Currently, American opponents of gaming are aggressively seeking to prohibit Internet gambling. In Canada, legislators appear to be waiting for the international gaming structure to be established before determining the appropriate level of regulation. In terms of a prospective regulatory role model, Australia has been both progressive and forward-looking in determining a more efficient market structure for Internet gambling. Australian regulators view the Internet gaming industry as merely another form of e-commerce that does not require prohibition.

Internet gambling sites offer a variety of gaming opportunities, including casino-style gaming such as blackjack, roulette, poker, and other traditional table games. Also available on the Internet are on-line casinos, lotteries, bongoes, and sports betting. What distinguishes Internet gambling from more traditional forms of gambling is the physical separation between the service provider and the consumer. It is estimated that there are 200 million people worldwide who now have access to the Internet. As such, the Internet offers these potential consumers convenient and inexpensive access to their favorite gaming sites, introducing competition into an industry once dominated by highly restrictive licensing practices.

Opponents of on-line gambling share a concern that, because the Internet may be used anonymously, there is the potential for abuse of Internet gambling both by those unable to control their gambling and by underage gamblers. Critics believe that the privacy provided gamblers by the Internet will exacerbate problem gambling and provide underage gamblers with the opportunity to use their parents' credit cards, or even their own, to set up Internet gambling accounts.

However, there are regulatory mechanisms that may be employed to ensure that consumers are protected and the gambling-related criminal element is minimized. For example, to prevent money laundering, the government should restrict the amount (or frequency) of cash deposits into players' accounts, thereby limiting the opportunity for money laundering. Although there is concern about the legitimacy of all Internet gambling sites, most operate as legitimate businesses and, like any reputable business, rely on a strong customer base to remain profitable. The necessity of maintaining a strong customer base will motivate service providers to offer legitimate gambling sites.

There is concern that the autonomy provided by the Internet may also encourage abuse of this form of gaming. Once again, sensible regulation may be the solution. For example, Australia has a number of jurisdictions where Internet gambling is legal. It would be difficult to open an account under the alias of another person's name as it would require developing a false identity, along with supporting documents such as a passport and drivers license. Furthermore, restrictions on players' identification and place of residence make it costly for someone to open an account under a false name.

Prohibiting on-line gaming would be extremely difficult. Attempts to prohibit Internet gambling in industrialized countries have resulted in many Internet gaming sites being established in small nations with little or no government regulation. There are a number of arguably insurmountable challenges faced by governments that endeavor to criminalize on-line gambling. There is a great degree of surveillance required to detect on-line illegality, and there are difficulties in locating, investigating, and prosecuting on-line offenders. In addition, the technological and human capital required to locate offenders is substantial, as are the costs of prosecution and incarceration.

Along with the inefficient use of resources caused by prohibition, there is the threat of unintentionally increasing the criminal element. Current estimates of market potential for this burgeoning industry show there is a demand for Internet gambling. The fact is that, if the marketplace demands Internet gambling, Internet gambling will be supplied with or without government consent. This is especially true given service providers' unrestrained access to overseas Internet sites in jurisdictions without Internet gambling restrictions. Furthermore, the inevitable failure of prohibition is attributable to two factors: first, Internet technology renders prohibition futile—as an international network, the Internet provides an instant detour around domestic prohibition; and, second, consumer demand for Internet gambling and the government's demand for tax revenues will create enormous pressure for legalization.

One of the primary benefits of allowing Internet gaming is that competition will be introduced into a marketplace that is highly regulated and dominated by licensed providers that monopolize the gaming market. Increased competition results in a more efficient allocation of resources as gaming providers attempt to maintain and attract new customers. This form of gaming also encourages private-sector businesses to develop network capacity and commerce. Not only will this increased competition result in a wider range of gaming activities but consumers will have cheaper and easier access to these gaming activities.

Gambling should be privatized

Currently, governments perform a number of distinct roles in the gambling industry. First, as a prohibitor, government may enforce gambling prohibition by vigorous policing or by enacting laws that make it illegal to gamble. Second, as a passive observer, government permits the operation of private social gambling without regulation or oversight. Finally, as a quasi-entrepreneur, government owns and operates gambling operations as public enterprises.

If gambling is legal, the industry should be in the hands of the private sector. In most areas of economic activity, privatization leads to greater efficiency and the wider availability of products and services. This is because private companies have strong incentives to provide better services at reasonable prices. If a private company is unprofitable or closes, the losses are shouldered entirely by the investors. Publicly owned companies, on the other hand, have fewer incentives to provide reasonably priced products because government-owned business ventures operate at taxpayer expense. In other words, the government does not bear the risk of being unprofitable and closing; rather, the risk is shared between the government and taxpayers.

Our opposition to government-owned gambling operations centers around a lack of confidence in the ability of the government to remain objective when considering the public interest whilst serving as both the regulator and the principal beneficiary of gambling activities. Government claims of objectivity in regulating the gambling industry are questionable as the public's demand for increased social spending pressures governments to spend more money without increasing personal income taxes.

In many jurisdictions, the government has granted itself a monopoly over the gambling marketplace. These government monopolies detract from the overall quality of the gambling industry by limiting competition and maintaining artificially high prices (e.g., lower payout ratios). By limiting entrants to the marketplace, the motivation to ensure a more efficient allocation of resources in order to attract new customers is essentially eliminated. Moreover, enterprises with diminished competition have attenuated incentives to offer an inexpensive range of diverse, quality products.

In Canada, the government is both the regulator and beneficiary of gambling activities. In today's Canadian gambling marketplace, it is not uncommon to observe governments that are directly involved in the promotion and organization of gaming activities. For example, lotteries in Canada are exclusively owned and operated by government. Government control over the gambling industry is enforced by the licensing of gaming venues, heavy taxation on gamblers, and a restriction on the

number of gaming venues and the type of gaming opportunities provided to the public. Although the structure of the gambling industry varies among the provinces, gambling regulation is often designated to provincial gaming commissions and similar regulatory bodies.

Lotteries are the most widespread form of gambling in Canada and the United States and are the only form of gambling that is a virtual government monopoly. In both the United States and Canada, lotteries have become one of the most profitable government-owned enterprises. There is an obvious irony surrounding the government's awarding itself a complete monopoly over lotteries and becoming an active promoter of lotteries, while simultaneously imposing a heavy "sin" tax on lottery-ticket purchases. By granting itself a monopoly over lotteries, the government operates without competition. The absence of competition allows the government to acquire large monopoly rents, effectively generated by what may be considered an unreasonable consumption tax on lottery participants.

Private British gaming has been considered well regulated and fair since the establishment of The Gaming Board for Great Britain in 1968. Although private or public companies may run British casinos, there are no government-run casinos in Britain. The National Lottery is privately operated under a government-granted monopoly. Betting on sports, horse racing, and other forms of pari-mutuel racing is operated by private enterprises under strict government regulation.

In Australia, most of the gambling industry operates under some form of government-granted monopoly. Because the availability of gaming venues is limited by monopoly rights, however, consumers have less access to gambling than would be available in a competitive market. In addition, government restrictions on the availability of gaming machines reduce the benefit to consumers by limiting consumers' choice of venue.

The success of the gambling industry depends on a high standard of integrity and regulation. In our view, the government best achieves this goal by relinquishing its monopolistic control of the gambling industry, introducing competition among private enterprises, while maintaining operational controls through independent government regulatory organizations. Abolishing the government monopoly and allowing businesses to enter and exit the marketplace freely will allow market forces to determine the structure and size of the gambling marketplace, as opposed to the government. Competition will ensure that consumer demand is met, that greater market efficiency results, and that the industry moves toward a more efficient level of operation. Even if the government were to relinquish its monopoly, governments could still profit from the taxation of private gambling operations.

A privatized company has more incentive to provide a variety of games and to increase the percentage of winners from lotteries to maintain a strong customer base. The success of the privatization of the sports-betting industry has been demonstrated in the United Kingdom. In the United States, on the other hand, sports wagering is illegal in all but two states. Sports wagering reached US$2.3 billion in Nevada's legalized sports books in fiscal 1998. However, estimates of the scope of illegal sports gambling in the United States range from US$80 billion to US$380 billion annually.

Privatizing the gambling industry and introducing competition will increase market efficiency while satisfying consumer demand. Consumers will benefit from the elimination of government monopolies through increased competition and gambling service providers offering a greater diversity of quality products. Furthermore, by establishing itself exclusively as a regulatory regime, the government will alleviate public concern regarding the controversial role of government as regulator and beneficiary of gambling operations.

Consumer freedom of choice is preferable to government paternalism

This report concludes by addressing the most fundamental yet most frequently overlooked aspect of the gambling debate. Simply stated, should one have the right to choose whether or not to gamble? The extent to which a person has the ability to behave and to spend money as he or she pleases is an important determination of a truly free society. Even if a minority of people choose to engage in gambling activities, the individual right to freedom of choice should be respected. We do not believe that the government should be in the business of either encouraging or discouraging gambling. If individuals choose to gamble, that is their choice. Furthermore, if individuals and private organizations identify a demand for gambling and desire to provide opportunities for gambling, that also should be their choice.

Consumers are the best judges of their own welfare. The evidence from four leading industrialized democracies is clear: most people who gamble do so willingly and rationally and as a form of entertainment. Therefore, the small number of people who are unable to control their gambling does not merit heavy-handed government intervention. Although there are socially harmful activities that require government intervention, gambling should not be considered one of those activities. Furthermore, those who become addicted to gambling rarely threaten the overall harmony of the community.

Psychological risks are prevalent in a small number of individuals whose vulnerability to a variety of society's stimulants is best handled through the treatment of biochemical imbalances, correction of faulty reasoning, and reinforcement of inadequate means of coping with adversity rather than by banning every conceivable activity enjoyed by large numbers of low-risk people that might promote risky behaviour in a few.

The implications for policy-makers are clear. Gambling prohibition is both unnecessary and unworkable. As problem and pathological gamblers will seek out opportunities to gamble even when it is difficult to do so, banning gambling is not the answer. The political and popular momentum behind legalized gambling reflects an ongoing, and welcome, devolution in decision making over the past 20 years. In practice, this has meant a devolution of choices to the individual citizen that used to be the exclusive domain of an elite group of social engineers. The fact that engaging in gambling activities harms certain individuals does not imply that no one should be allowed to gamble. Gambling is about choice: people from all walks of life want to enjoy their freedom and that includes the right to do what they want with their own money. We trust that gambling prohibitionists will take note that, in addition to intruding upon gamblers' liberties, prohibition makes a mockery of individual responsibility. This is hardly the best way to sustain the nation's moral health.

Introduction

> *For as long as humans have gambled, there has been apprehension about excessive risk-taking and intemperate gambling.*
>
> The National Research Council

Neither gambling nor opposition to gambling is a new phenomenon. From their respective philosophical vantage points, leftist critics have long viewed gambling as an economic albatross around the neck of the working classes while social conservatives continue to regard gambling as a moral disease whose painful symptoms spread poisonously throughout civil society.[1] In the mid-nineteenth century, as prominent a social commentator as Charles Dickens devoted a magazine article to a critique of gambling (Dickens 1852). A decade-and-a-half later, the great Russian writer Fyodor Dostoyevsky penned the autobiographical novel, *The Gambler* (1866), which grippingly described the psychology of problem gambling. In the modern era, the tone of the vast majority of media and cinematic examinations is little changed since the release of the movie *The Gambler*, a 1974 portrayal of habitual gambling's disastrous effect upon the life of an otherwise sensible college professor. Such concern reflects gambling's historical role as a popular leisure activity. Indeed, gambling was widespread in Ancient Rome (France 1902); it was enjoyed 3,000 years ago in Egypt and more than 5,000 years ago in China. However, what is new is our comparative ability to assess empirically the arguments both of those who claim that the costs of gambling outweigh the benefits and of those who conclude that the cost-benefit imbalance runs in the opposite direction.

At the commencement of this research, our assumption was that legalized gambling engenders both costs and benefits to the individual and to society. Therefore, the fundamental policy question addressed in this report is whether or not the benefits of legalized gambling outweigh the costs? Complicating such a cost-benefit analysis, however, is the fact that both the social and economic effects of gambling are inherently difficult to measure. This is especially true for many of the intangible social

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[1] The views of Republican presidential candidate Gary Bauer (www.frc.org/radio/c97110. html) epitomize the position of social conservatives both in Canada and the United States.

costs (e.g., the emotional pain experienced by family members of pathological gamblers) and benefits (e.g., the entertainment value derived from gambling). In preparing this report, our research encompassed a comprehensive review of the relevant social-science literature in order to identify and analyze those empirical studies that shed the most light upon the nature and consequences of legalized gambling. Allowing for the difficulties in quantifying the intangible costs and benefits of gambling, this report provides as detailed a socioeconomic overview of the impact of gambling as is empirically feasible.

Heightened public awareness of, and participation in, gambling has sparked considerable debate between opponents and proponents of gambling about both its economic viability and its overall effect on society. There are several factors that explain the phenomenal growth of the gambling industry over recent decades. For example, productivity gains and increased disposable income have provided consumers with more time for leisure and recreational activities. In addition, changing sociodemographic characteristics (such as more dual-income households, more families with fewer children to support, members of the "Baby Boom" generation reaching their peak earning potential, and a more tolerant social attitude toward gambling) have acted as stimulants to consumer spending on gambling activities.

To examine the social impact of gambling, we address several specific questions. For example, what are the impacts of gambling on the individual gambler and on the family and the community in which the individual gambler lives? These impacts include marital problems, bankruptcies, as well as entertainment value. Regarding economic costs and benefits, the approach is to quantify those costs and benefits at the individual, regional, and national level. This involves assigning value to economic costs and benefits such as government revenue, employment, industry multipliers, crime, and a number of other possible, ancillary effects of the gambling industry.

In addition to a socioeconomic analysis, this report discusses what the appropriate role of government should be in regard to gambling. Currently, North American municipal, provincial, state, and federal governments 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— the right to choose whether or not to gamble, and on what terms—in the face of the increasingly paternalistic attitude of government.

Most analyses and commentaries on the subject of gambling are intentionally parochial in nature; that is, they focus exclusively on gambling's impact upon a specific community, region, or country. This is especially true both of the industry-sponsored

studies that most loudly trumpet gambling's benefits and of the most scathing journalistic examinations (for a recent Canadian example of the latter, see Hutchinson 1999). In this report, we explicitly take a much wider 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.

Why did we examine three countries in addition to Canada? We chose the United States because so much of the most rigorous research material (especially regarding gambling on Indian reservations) pertains exclusively to that country's experience with legalized gambling; and we chose the United Kingdom and Australia because their respective experiences with legalized gambling are far deeper (e.g., Queen Elizabeth I chartered the first English lottery in 1569) and more widespread than experience in either Canada or the United States. In other words, both the United Kingdom and Australia have travelled much farther down this policy road than has English-speaking North America (particularly much of Canada) and, therefore, it may be possible for us to assess more clearly the long-term costs and benefits of legalized gambling by casting an analytical eye over developments in these two analogous societies.

Legalized gambling and the gambling industry

For the purpose of this report, gambling is defined as, "The lawful placement of a wager or bet on the outcome of a future uncertain event" (National Gambling Impact Study Commission [NGISC] 1999a]. Gambling has a number of characteristics other than risk-taking that distinguish it from activities such as investing in the stock market, which is not a comparable zero-sum game (see Johnson and Pazderka 1995). First, as a group, gamblers necessarily lose money as a result of this activity because the total "prize" consists of the accumulated stakes of gamblers, less the taxes paid to government and the profits garnered, and costs borne, by operators; second, gambling is typically presented as a form of entertainment; and, third, the gambling industry involves those activities that people perceive as gambling or governments treat as gambling for regulatory and taxation purposes.

The most common forms of gambling include casino gaming (such as gaming machines and table games), betting and wagering on racing and sporting events, lotteries, and similar forms of gambling such as keno and bingo. A term often used interchangeably with gambling is "gaming." Gaming refers to all legal forms of gambling *other than racing* (e.g., lotteries, video lottery terminals [VLTs], casino gaming, pools and minor pools).

In 1994, lottery sales were approximately US$100 billion worldwide, an 11 percent increase from the previous year (Goodman 1995). The United States led the lottery world, with more than one-quarter of those sales. Germany was a distant second, with US$9.2 billion in sales, followed by Spain and Japan. Table 1 shows the world lottery sales from 1995 to 1998. The Tasmanian Gaming Commission (1998) reported world lottery sales of US$118.0 billion in 1997 and of US$124.4 billion in 1998.

As for the casino gambling industry, the trend toward legalization has been a significant factor in its rapid development. Furthermore, according to Eadington (1999), this trend has emerged at a time of fundamental change in the structure of ownership, regulation, and general public perception of casinos. Casinos have been legalized (with various restrictions) in many countries, including South Korea (1967), Australia (1973), the Philippines (1977), Spain (1978), New Zealand (1990), Canada (1990), and South Africa (1995) (Goodman 1995).

Gaming machines are found in many countries in the form of VLTs, electronic gaming machines (EGMs), electronic gaming devices (EGDs), "fruit" machines, and slot machines. According to a study of market share conducted in 1997 by *International Game Technology* (*IGT*), there were a total of 690,770 slot machines in the 12 countries shown in table 2.

Table 1: World lottery sales (US$millions)

	1995	1996	1997	1998
Africa	$429.0	$289.0	$280.0	$272.8
% of total	0.4%	0.02%	0.2%	0.22%
Australia & New Zealand	$2,594.0	$2,888.7	$2,600.0	$2,334.8
% of total	2.3%	2.4%	2.2%	1.88%
Asia & Middle East	$13,681.5	$14,900.0	$14,300.0	$13,390.7
% of total	12.0%	12.3%	12.0%	10.78%
Europe	$55,175	$56,274.4	$55,000	$61,246
% of total	48.6%	46.6%	46.2%	49.32%
Central & South America	$3,903.9	$3,951.9	$4,200.0	$4,114.9
% of total	3.4%	3.3%	3.5%	3.31%
North America	$37,819.8	$42,394.3	$42,600.0	$42,825.6
% of total	33.3%	35.1%	35.8%	34.49%
Total	$113,724.2	$118,866.6	$118,980.0	$124,185.4
% change	19.1%	4.9%	0.01%	4.4%

Source: Tasmanian Gaming Commission (www.lotteryinsider.com.au/stats/world.html).

Canada

Legal gambling has existed in Canada for over 25 years. "Before ... 1969, Canada was an illegal gambling society" (Vaillancourt and Roy 2000). In 1969, the Criminal Code was revised to permit the federal and provincial governments to regulate and participate in a range of lottery schemes; charities were also allowed to conduct and profit from a similar, but narrower, range of activities (Marshall 1996). In Canada, casino market organization varies among the provinces. In Quebec and Manitoba, casinos are owned and operated by the provincial government. In other provinces, such as Ontario, casinos are owned and operated through joint ventures between government and private businesses.

State-run lotteries began during the late 1970s, when the federal government established "Lotto Canada" and the "Sports Pool Corporation." However, provincial opposition to direct competition from federally run lotteries resulted in the federal government relinquishing its involvement in lotteries as of January 1, 1980. In return, the provinces agreed to contribute to the federal government an annual payment of

Table 2: Number of slot machines by country (1997)

	Number of Slot Machines
United States	405,494
Canada	17,092
Caribbean	12,100
Central America	3,281
South America	23,097
Australia	130,227
New Zealand	12,174
Rest of Oceania	2,009
Asia	7,062
Europe	66,032
North Africa	830
Rest of Africa	11,372
Total	690,770

Source: *International Game Technology* Market Share Study.

$24 million (in 1979 dollars), adjusted for inflation, in perpetuity. In 1998, this amount was $52.4 million. Table 3 shows payments from the provinces to the federal government during 1997/1998.

Both provincial and territorial governments now offer a variety of lottery products, including traditional tickets (e.g., Lotto 6/49), instant-win tickets, and tickets based on the outcome of sporting events. According to the provincial and regional lottery corporations, gross sales of lottery tickets in 1998 fiscal year surpassed $2.6 billion (Marshall 2000).

Video lottery terminals (VLTs) were introduced into the Atlantic provinces in the early 1990s, and quickly spread to other provinces. VLTs are now found in all provinces except British Columbia and Ontario, and have become a major source of government revenue. VLTs are considered especially addictive and are often described as the "crack cocaine of gambling" because particularly little skill or knowledge is required to play. Casinos have been established in Quebec, Ontario, Nova Scotia, Manitoba, and Saskatchewan. Charity casinos are permitted in British Columbia, Alberta, and Ontario. Of the other forms of gambling, lotteries, bingo, and pari-mutuel gaming are available in all Canadian provinces. An estimated $20 billion to $27 billion is wagered annually on all forms of legal gambling. Of that amount, $8.1 billion was spent (after winnings were paid out) on government-run gambling in 1999, representing a nine-percent increase from 1998 and a 300-percent increase since 1992 (Marshall 2000).

Table 3: Provincial gambling-related payments to the government of Canada

	Payments to the Government of Canada
British Columbia	$ 6,714,000
Alberta	$ 5,022,000
Saskatchewan	$ 1,788,248
Manitoba	$ 1,946,873
Ontario	$36,558,000
Quebec	$12,999,000
Atlantic Provinces	$3,601,000

Source: Lottery Annual Reports 1997/1998.

As shown in table 4, there are a number of restrictions placed on the availability and location of VLTs. In provinces where VLTs are permitted, premises that are licensed or restricted to those a over certain age are the only locations providing public access to gaming machines. This ensures that minors do not have access to VLTs. Interestingly, until a few years ago, VLTs were available in corner stores and local shops throughout Nova Scotia and New Brunswick. VLTs are further restricted in the provinces of Alberta, Saskatchewan, Manitoba, and Prince Edward Island, which have capped the number of these machines that may be introduced.

Horse racing is regulated and managed by the Canadian PariMutuel Agency. Unlike other forms of gaming in Canada, provincial revenues from racing taxation are not earmarked for spending on charitable causes. Instead, profits are returned to the industry for breeding programs and the overall improvement of the industry.

Casinos moved to the forefront of the gambling industry in the early 1990s. Prior to the establishment of government-owned monopoly casinos in Winnipeg, Halifax, Montreal, Windsor, Hull, and Regina, casinos were limited to "charity casinos," which were solely permitted to raise revenue for "good causes." These were predominately located in Canada's western provinces (Alberta, Manitoba, and British

Table 4: Availability and access to VLTs in Canadian provinces (as of March 31, 1998)

	Number	Per Adult	Restrictions
British Columbia	N/A	N/A	N/A
Alberta	5,900	1/355	numbers capped, licensed premises
Saskatchewan	3,340	1/223	numbers capped, licensed premises
Manitoba	4,800	1/177	numbers capped, age-restricted premises
Ontario	N/A	N/A	N/A
Quebec	15,266	1/376	licensed premises
New Brunswick	3,719	1/158	licensed (as of 2000)
Nova Scotia	3,533	1/206	age-restricted premises
Prince Edward Island	339	1/302	numbers capped, licensed premises
Newfoundland	2,373	1/181	age-restricted premises

Sources: Provincial Lottery Commissions.

Columbia). In addition, so-called "destination casinos" have been established in Niagara Falls, Ontario, Charlevoix, Quebec, and Sydney, Nova Scotia (Eadington 1999).

In 1998, 77 percent of Canadian households reported spending money on at least one form of gambling (Marshall 2000). These households spent an average of $460. Of all forms of gambling, Canadians most favour government-run lotteries. In 1996, households were asked to report their spending among four types of gambling activity: government lotteries were the most popular (68 percent), ahead of non-government lotteries and raffles (34 percent), casinos and slot machines (20 percent), and bingos (10 percent) (Marshall 2000). By 1999, legal gambling supported the operation of 21,000 slot machines, 38,000 VLTs, 20,000 annual bingo events, 50 casinos, and 44 horse-racing tracks in Canada (Azmier 2000).

United States

> *Gambling is as American as the state lotteries that helped fund the Revolution and many public works projects in the young Republic.*
> George F. Will, Runnin', Gunnin' and Gambling, *The Washington Post*

Both the size and the growth of the American gambling industry are unsurprising given that, "Gambling in America has deep cultural roots" (National Research Council 1999: 1). After all, colonial America featured both government and private lotteries (Ezell 1960). The Reconstruction era after the American Civil War ushered in a second era of gambling, when lottery revenues (i.e., voluntary taxation) were used to rebuild the Southern states (Ezell 1960). The second era of American gambling ended in 1890, when a Louisiana state-lottery scandal prompted federal legislation prohibiting both state lotteries and most other forms of gambling (Ezell 1960). The third era of American gambling did not begin until the 1930s, first in Nevada (1931), and involved pari-mutuel race-track betting in 21 states but did not include a state lottery until New Hampshire initiated one in 1964 (Rose 1986, 1995).

In 1976, Americans legally bet US$17.3 billion. By 1997, Americans were betting over US$630 billion (Will 2000). In terms of spending, gambling is more popular in America than baseball, going to the movies, and Disneyland combined (O'Brien 1998). In 1973, lotteries were found in just seven states and had total sales of only US$2 billion; in 1997, lotteries earned US$34 billion in sales. According to a recent survey, 32 percent of American households gambled at a casino in 1996. Those who did averaged 4.8 visits, for a total of 176 million visits (Calvert 1999a: 2). Overall, more than 80 percent of American adults now report having gambled sometime during their lifetime.

There are 47 American states that allow one or more forms of legalized gambling; the only exceptions are Hawaii, Tennessee, and Utah. Pari-mutuel racetracks are the

most prevalent form of gambling and are now legal in over 40 states. Lotteries have been established in 37 states, as well as the District of Columbia. As of 1999, 21 states allowed either casinos or casino-style games to operate. Nevada and New Jersey legalized casino gaming in 1931 and 1976, respectively. Jurisdictions that have legalized casino gaming since 1989 include Colorado, Illinois, Iowa, Louisiana, Iowa, Louisiana, Mississippi, Missouri, and South Dakota.

In most states, gaming was legalized as a result of successful referendum campaigns. Although all levels of government are responsible for gambling regulation, casino regulation is determined by individual states. Therefore, casino gambling regulation varies among the individual states. For example, Nevada determines the structure of the industry based on market forces. Conversely, New Jersey has not permitted the expansion of casino gambling and operates its casinos under strict regulation.

Today, there are 49 greyhound tracks operating in 15 states. Greyhound racing is responsible for approximately 14 percent of the total revenues from pari-mutuel betting. In 1996, the gross amount wagered in the greyhound industry totaled US$2.3 billion. The industry accounts for approximately 30,000 jobs directly related to the operation of the racetracks and other agriculture operations (NGISC 1999a: 2-11). Attendance at greyhound racing (table 5) has increased significantly since its inception in the 1950s but, as of 1990, attracted a smaller number of attendees than horse racing and other sporting events.

Table 5: Attendance at selected sports in the United States, 1940 to 1990 (000s).

	1940	1945	1950	1960	1970	1980	1990
Horse racing	8,500	18,900	29,291	46,879	67,704	74,690	63,803
Greyhounds	—	—	6,083	7,924	12,660	20,874	28,660
Baseball	—	—	17,463	19,911	28,747	43,746	55,509
Football (NFL)	—	—	2,115	4,153	9,991	14,092	17,666

Notes: Horse racing in 1940 and in 1945 excludes harness racing and quarter horses; these are included in subsequent years.

Sources: US Department of Commerce, Bureau of Census (1960). *Historical Statistics from Colonial Times to 1957*. Washington, DC: 255. US Department of Commerce, Bureau of Census (1977). *Social Indicators 1976*. Washington, DC. US Department of Commerce, Bureau of Census (1992). *Statistical Abstract of the US*. Washington, DC: 239.

The horse-racing industry is the largest sector within pari-mutuel gaming. Wagering on horse racing is legal in 43 states, generating annual gross revenues of approximately $3.25 billion. Although there are over 150 operational racetracks, most wagering takes place via satellite broadcasting, allowing wagering on races occurring elsewhere or at Off-Track Betting sites (OTBs). An estimated $550 million was wagered in 1998.

Modern riverboat casinos began operating in Iowa in 1991; by 1998, there were over 40 riverboat casinos operating in Illinois, Indiana, Missouri, and Iowa, and approximately 50 riverboat and dockside casinos in Louisiana and Mississippi. In 1997, revenues from riverboats totaled $6.1 billion (NGISC 1999a).

Currently, electronic gaming devices (EGDs) are found in seven states. Many states limit the number of gaming machines permitted within a gaming venue. In Nevada, for example, venues with non-casino gambling licenses may operate a maximum of 15 machines (Productivity Commission 1999a). Other states limit the amounts of money and prizes paid to players. Taxation requirements also vary between the states. For example, in South Dakota, the state government receives 49.5 percent of gaming-machine profits while in Oregon the state government owns the machines outright and receives 66 percent of gaming-machine profits. Table 6 shows the number of gaming machines available throughout the United States.

Table 6: Availability of electronic gaming devices (EGDs) in the United States

	Reported number of machines	Year
Louisiana	15,000	1999
Montana	17,397	1998/1999
Nevada	17,922	1999
New Mexico	6,300	1999
Oregon	8,848	1999
Southern California	34,000	1999
South Dakota	8,000	1988

Source: NGISC 1999a: 2–4.

Australia

Among Western industrialized nations, Australia has a relatively long history of legalized gambling and one of the highest levels of per-capita spending on gambling. The gambling turnover (i.e., amount wagered) in Australia during 1996/1997 was just under AUS$80 billion, with an average per-capita turnover of $5,868. The total industry profit (or gamblers' losses) was over AUS$10 billion; government gambling revenue was just under $3.5 billion, a dramatic increase from its 1972/1973 level, AUS$992 million (Australian Medical Association 1998). The gaming industry's contribution to GDP, i.e., its economic "value added," was $5.5 billion or just over one percent of GDP (ACIL Consulting 1999).

Gross takings are the sum of all components of income before the payment of prize money and winnings. Net takings are the gross income from gambling after the payments of prize money and winnings. In 1997/1998, net takings amounted to AUS$11.8 billion (Tasmanian Gaming Commission 1998). Table 7 shows a breakdown of the net and gross takings by type of gaming activity in 1994/1995.

Casinos were legalized in a number of small Australian cities during the 1970s. Private-sector monopoly casinos opened in Hobart in 1972, followed by other casinos in Launceston, Alice Springs, and Darwin. Most of these were small casinos that catered to a mix of local inhabitants and tourists (only Hobart generated significant tourism business) (Eadington 1999). EGMs were legalized following the *Gaming Machine Control Act* in 1991 and were quickly introduced into licensed clubs and hotels throughout the nation. There are approximately 180,000 EGMs in Australia, representing 21 percent of all EGMs around the world (Productivity Commission 1999a).

Table 7: Measures of gross and net takings in Australia (1994/1995)

	Net Takings ($M)	Gross Takings ($M)
Poker gaming machines	1,196.0	N/A
Casino Keno	25.5	N/A
Other casino gambling	1,012.7	N/A
Lotteries, Keno, lotto, pools, scratchies	1,344.6	3,439.1
On-course totalisators	1,300.6	365.5
Off-course TAB	Inc. above	8,022.7
Bookmakers	44.2	839.7

Source: Australian Bureau of Statistics 1997, Cat No 8684.0.

Similar to other jurisdictions, Australia has imposed a number of restrictions on the operation of gaming machines. For example, the state government of Queensland licenses gaming venues, limiting the number of machines available on-site to a maximum of 300. In addition, operators are required to return to players 92 percent of the money wagered in machines.

Australian consumers prefer lotteries (51 percent), instant lotteries (47 percent), and gaming machines (30 percent). Table 8 shows the frequency of gambling by specific forms in the state of New South Wales, where lotteries, slot machines, and off-course betting have been available for at least 10 years.

United Kingdom

According to Copps (1999), gambling in Britain is a £7 billion-a-year industry that generates approximately £400 million a year in tax revenue for government. Furthermore, the nine-percent fee levied by bookmakers provides an additional £54 million that is returned to the horse-racing industry.

The United Kingdom's *Lotteries and Amusements Act of 1976* stipulates that no more than 50 percent of proceeds from lotteries may be used for prizes, and that no more than 25 percent of proceeds may be taken for expenses, ensuring that at least 25 percent of lottery proceeds go to "good causes." British political culture contains an aversion to raising government revenues from gambling activities. Consequently, British gaming laws are *not* intended to provide new tax revenues. Rather, the primary purpose of the legislation is to control the types and amount of gambling in the attempt to reduce any harmful social side-effects (Beare and Hampton 1984).

Table 8: Frequency of gambling (lottery, slot machines, horse racing) of adults in New South Wales (%)

	Played lottery	**Played slots**	**Bet on horse racing**
Once per month	8.5	9.8	4.0
2 to 3 times per month	7.9	10.5	2.3
4 times per month	19.2	3.3	0.9
More than 4 times per month	3.4	3.7	1.7
Total	39.2	27.7	9.2

Source: Adapted from Caldwell et al. 1998.

The National Lottery Commission is responsible for the regulation of the National Lottery. Camelot, a consortium of four private companies, was awarded a monopoly license to operate the National Lottery between 1994 and 2001. According to the Productivity Commission (1999a), 50 percent of revenues are awarded in prizes, 28 percent are contributed to good causes (i.e., arts, sports, charities, heritage, celebrating the millennium, health, education, and the environment), 13 percent are paid in tax, five percent go to retailers of lottery tickets, three percent cover Camelot's operating expenses, and one percent constitutes Camelot's profit. Table 9 shows the lottery sales and number of lotteries available in England, Wales, and Scotland.

Two areas in which the British gaming industry varies greatly from the Canadian, American, and Australian gaming industries is in its regulation of casinos and fruit machines (known as VLTs in Canada, EGDs in the United States and EGMs in Australia). Unlike other jurisdictions, slot machines are legally available to children in the United Kingdom. With the exception of premises where a voluntary code restricting access to those under16 years of age is effectively enforced, fruit machines are played by children in amusement arcades, cafés, fish-and-chip shops, and (albeit illegally) pubs. Fruit machines in the United Kingdom are pre-set to pay out a specified percentage (usually between 70 and 80 percent) of the money they take so that, in the long run, the machine cannot lose (Fisher 1993).

Government regulation ensures that British casinos cater to so-called "unstimulated demand." In other words, if one wishes to gamble in a casino, one must be a member

Table 9: Lotteries in Britain (England, Wales and Scotland), 1977 to 1991[1]

	Local Authorities		Charitable Societies	
	Numbers	Sales (m.)	Numbers	Sales (m.)
1977/1978	1,202	9.29	1,297	9.59
1978/1979[2]	4,812	31.95	8,319	59.76
1979/1980[3]	3,000	18.52	9,174	65.41
1982	1,186	7.59	4,730	44.92
1985	5,98	4.42	1,574	20.61
1990/1991	1,48	2.02	8,55	25.46

Notes: [1] Includes only lotteries registered with the Gaming Board; [2] Peak year for local authorities' lottery numbers and turnover; [3] Peak year for charitable lotteries.

of the casino or a member's guest. To become a member, one has to find a casino club, which may prove difficult given that casino clubs are not permitted to advertise or even to publish their telephone numbers in the Yellow Pages™. To join a casino club, one must apply in person and allow 48 hours to elapse before playing. Other restrictions are that one not be able to use a credit card or drink alcohol at the gaming table, while the casino is not allowed to provide live entertainment for its customers.

In comparison to the North American and Australian casino industries, the British casino industry is quite small (Eadington 1999). In 1997/1998, there were 115 casinos operating in the United Kingdom (approximately the same number found in the 1970s). Gross gaming winnings were about £490 million (US$800 million), of which 65 percent came from London-based casinos (Gaming Board 1998, cited in Eadington 1999). According to Christiansen (1998), gross casino gaming revenues made up seven percent of legal gaming revenues; this compares to 50 percent generated by American casinos (Eadington 1999).

In 1995/1996, gaming machines represented approximately 38 percent of the British gaming market, with 210,000 fruit machines and 45,000 jackpot machines. As they are in the countries previously discussed, gaming machines are strictly regulated, with limits on numbers, stakes, and prizes. In accordance with *The Betting and Gaming and Lotteries Act, 1963*, the Horserace Betting Levy Board collects a levy from bookmakers on the turn-over from off-course betting on horse racing and from the Totalisator (Productivity Commission 1999a). The revenue generated by these funds is used to improve horse breeds, advance veterinary education, and further the overall improvement of the horse-racing industry. Table 10 shows the betting levy raised from bookmakers and the Totalisator by the Horse Racing Betting Levy Board.

Table 10: Betting levy raised by the Horserace Betting Levy Board from 1962 to 1991 (in millions of pounds, current prices)

	Bookmakers	Totalisator
1962/1963	0.9	0.9
1966/1967	2.3	0.7
1971/1972	5.0	0.0
1975/1976	8.1	0.2
1981/1982	16.9	1.0
1985/1986	20.0	1.0
1990/1991	35.9	1.1

Source: Horseracing Betting Levy Board, *Annual Reports*.

How prevalent is problem gambling?

As supporters and opponents of gambling contend for public support, the polarity of views surrounding the issue of gambling will influence public opinion about the benefits or negative impacts attributable to gambling. As such, societal attitudes also may be influenced by the manner in which problem gambling is defined and presented to the public. Hence, an overestimation of the prevalence of problem and pathological gambling would hinder policy makers attempting to address the issue of problem gambling, while the inflation or underestimation of the number of cases of problem and pathological gamblers makes it difficult to estimate the overall costs of gambling to society as a whole.

The most widely used and recognized method of measuring the prevalence of problem and pathological gambling is the South Oaks Gambling Screen (SOGS). SOGS identifies three distinct groups of gamblers:

(1) non-problem gamblers—those who gamble and do not experience adverse effects;

(2) potential problem gamblers—those who gamble heavily, are not fully addicted to gambling, but have experienced problems with gambling; and

(3) probable pathological gamblers—those who are addicted to gambling and are unable to stop gambling despite harmful effects to their personal life, job, or family.

The measurement problem

SOGS was developed as a "convenient screen (for) clinical populations of alcoholics and drug abusers, as well as general populations, for pathological gambling" (Lesieur and Blume 1987). It has been used in population-based research in the United States, Canada, Asia, and Europe, making it one of the most commonly used measurement tools for assessing the existence of problem gamblers. The advantage of using SOGS as a standardized measurement tool is that the prevalence of problem gambling may be compared across different regions and countries.

SOGS identifies respondents without gambling problems, and those who are poten-
tial problem gamblers, or probable pathological gamblers both over their lifetimes
and over the previous year. As determined by SOGS, lifetime problem gamblers are
those who score three or four points on the lifetime SOGS survey and lifetime prob-
able pathological gamblers are those who score five or more points. Current problem
gamblers are those who score three or four points on the past-year SOGS items and
current probable pathological gamblers are those respondents who score five or
more points on the past-year SOGS items.

The essential features of pathological gambling, as described by the American Psy-
chiatric Association, are a continuous or periodic loss of control over gambling, a
progression in gambling frequency and amounts wagered with gambling and in ob-
taining monies with which to gamble, and a continuation of gambling involvement
despite adverse consequences (Volberg 1997). Furthermore, behaviours exhibited by
pathological gamblers may include the following:

- an occupation with gambling
- spending large quantities of money to achieve elevated levels of excitement
- repeated unsuccessful efforts to control, cut down, or stop gambling
- using gambling to escape from personal problems
- chasing losses (i.e., continuing to gamble in hopes of recouping past losses)
- lying to conceal involvement in gambling
- participating in illegal acts to finance gambling
- jeopardizing job, education, or career opportunities to gamble
- depending on others for financial resources to alleviate desperate financial
  situations caused by gambling.

In examining SOGS as a measurement tool, Sterling Research Associates declared:

> Our concern is that statistics are only estimates of the true value in the pop-
> ulation, and the statistic for any given prevalence study tends to be small.
> When combined with the margin of error, the resulting confidence interval
> may not be overly meaningful for policy treatment decisions. Additionally,
> the small numbers of people picked up in these studies may give rise to ex-
> ceptional fallacies. That is, inferences made about the entire population—
> in this case, people who have problems with their gambling—may not hold
> true because of the small number of cases they are based on. (Sterling Re-
> search Associates 1998a: 27)

In other words, the small sample sizes used in SOGS to diagnose the prevalence of
problem and pathological gambling may not be an accurate measure of the preva-
lence of problem gamblers within the entire population.

Australia

According to the Australian Medical Association (1998), approximately 0.5 percent of the adult Australian population has a severe gambling problem, while another 0.6 percent are described as "at risk" for gambling problems. Alternatively, Dickerson, Allcock, Blaszczynski, Maddern, Nicholls, and Williams (1998) found that, based on the SOGS criteria, 0.45 percent of the adult population are "problem gamblers" and 0.85 percent of the adult population are "at risk" of developing gambling-related problems.

The criteria by which SOGS identifies problem and pathological gamblers has also been criticized. In countries such as Australia, where gambling has been an accepted form of recreation for many years, criteria such as the preoccupation with, or exposure to, gambling are not sufficient to diagnose problem and pathological gamblers. According to Dickerson and Baron (1998), SOGS, when used in a survey of the general population, is likely to overestimate the number of cases of problem gambling by a factor of five.

Culturally, Australians are more tolerant of gambling and, therefore, less likely to view gambling as an immoral activity than are many other societies. However, despite gambling's widespread acceptance throughout Australia, there are groups, such as the Inter-Church Gambling Task Force, that argue that, if one accepts that one percent of the population has a problem with gambling, and each problem gambler potentially affects seven other people, one is dealing with a significant problem in numerical terms. It is, therefore, important to note that the one percent estimate is based partly on some heavily qualified SOGS-based studies and partly on anecdotal evidence (ACIL Consulting 1999). Chambers and Schrans (1998) assert that many of the items used in SOGS could be measuring an individual's sensitivity to society's reaction to gambling rather than the act of gambling itself.

Canada

One of the debates surrounding the determination of the prevalence of problem and pathological gambling is how these numbers are presented to policy makers and the public at large. For those who seek to prohibit, or to enforce strict regulation of, gambling, demonstrating that a large number of people are adversely affected by gambling justifies its condemnation. Conversely, those who support the freedom to gamble argue that because gambling affects so few people negatively, those who have a problem with gambling require treatment while the activity itself should be left intact for recreational gamblers. As Canadian researchers Chambers and Schrans wrote:

Stating that two percent of the population has "problems with their gambling" is a blade with two edges. Advocates can use information to increase interest in the issue, as well as generate sources of funding for research and treatment. Conversely, others could argue the problem is too small to be concerned about, especially given the magnitude of other social problems affecting society. (Chambers and Schrans 1998)

A study conducted by Dr. Howard Shaffer of Harvard Medical School identified three levels of gamblers in Canada and the United States:

(1) the proportion of the population that does not experience problem gambling—this includes both "non-problem" gamblers and non-gamblers;

(2) gamblers with sub-clinical levels of problem gambling, e.g., those considered "at-risk," "in transition," or "potential pathological";

(3) the most severe category of disordered gambling, often referred to as pathological gambling.

Tables 11 through 13 identify the prevalence of level-1, level-2, and level-3 lifetime and past-year disordered gamblers in Canada in 1997. Within the adult population, lifetime level 3 (or probable pathological) was estimated at 1.6 percent, and level 2 (or problem gambler) was 3.85 percent. In 1998, past-year prevalence was estimated at 0.3 percent for level 3 and 0.6 percent for level 2.

There have been a number of studies conducted by individual provinces to estimate the prevalence of gambling problems within their respective borders. Baseline Market Research Ltd. (1996a) used SOGS to determine that, in 1993, the lifetime prevalence of problem gamblers in the adult population of Nova Scotia was 4.8 percent. In 1996, using the same screen, 5.5 percent were classified as lifetime problem gamblers. Other study findings showed that approximately four percent of Nova Scotians have never participated in any gaming activity in their lifetime, eight percent have not participated in any gaming in the past year (including four percent that have never gambled), and 44 percent of the overall population participates in at least one gambling activity on a regular weekly basis. Ferris, Stirpe, and Ialomiteanu (1996) used SOGS to conclude that 80 percent of Ontarians have no gambling problems, about 17 percent have between one and two problems, about two percent have between three and four problems and may be considered "problem" or "potential pathological" gamblers, and that two percent meet the criteria for likely pathological gamblers.

A study by the Alberta Alcohol and Drug Abuse Commission (1999a) of 1,803 adult Albertans showed that 87.6 percent gamble responsibly, seven percent do not gamble at all, four percent experience problems with gambling, and 1.4 percent would be

Table 11: Prevalence of lifetime level-3 gambling in Canada

Adults in general population	1.6%
Youth in the general population	3.88%
College students	4.67%
Adults in treatment	14.23%

Note: The estimated percentage is the mean of the 95 percent confidence interval.

Source: Shaffer, Hall, and Vander Bilt 1997: iii–iv.

Table 12: Prevalence of lifetime level-2 gambling

Adults in the general population	3.85%
Youth in the general population	9.45%
College students	9.28%
Adults in treatment	15.01%

Note: The estimated percentage is the mean of the 95 percent confidence interval.

Source: Shaffer, Hall, and Vander Bilt 1997: iii–iv.

Table 13: Estimated number of past-year disordered gamblers in Canada (%)

	Adolescents	**Adults**	**Both**
Level 3	0.2%	0.3%	0.5%
Level 2	0.6%	0.6%	1.2%
Combined	0.8%	0.9%	1.7%

Note: The estimated percentage is the mean of the 95 percent confidence interval.

Source: Shaffer, Hall, and Vander Bilt 1997: 51; www.statcan.ca/english/Pgdb/People/Population/demo10a.htm .

considered probable pathological gamblers. Of a sample of 972 adolescent Albertans (12 to 17 years old), 33 percent were non-gamblers, 44 percent were non-problem gamblers, 15 percent were considered to be "at risk," and eight percent were considered problem gamblers.

Another area of interest is the relationship between problem gambling and addictions to other activities such as drinking alcohol and taking drugs. Studies have found that up to half of those in treatment for problem gambling may also have a substance-abuse problem. Thus, some individuals may require treatment for substance abuse and problem gambling either singularly or concurrently. Table 14 shows the prevalence of problem drinkers and problem gamblers in the adult population of Alberta. It shows that there is a higher percentage of social *non*-problem gamblers than social *non*-problem drinkers and that there is a greater percentage of the population with a drinking problem than with a gambling problem (15 percent to five percent).

United States

American scholars and policy analysts have conducted extensive research into the overall effects of the gambling industry. In 1975, for example, the Commission on the Review of the National Policy toward Gambling concluded that less than one percent of adult Americans were "probable compulsive" gamblers. The most recent investigation into the effects of legalized gambling is provided by the National Gambling impact Study Commission (NGISC). Established in August 1996, after anti-gambling forces in the United States Congress persuaded President Clinton to fund a two-year, multi-million dollar study, the NGISC consisted of a diverse group of nine individuals. Although there were no policy experts appointed, the commissioners included six who were overtly opposed to legalized gambling, primarily on moral grounds (Sullum 1999). Although the commission's official purpose was to

Table 14: Prevalence of problem drinkers and problem gamblers in Alberta

Current Drinking among Albertans		Current Gambling among Albertans	
Non-Drinkers	21%	**Non-Gamblers**	7%
Social Non-Problem Drinkers	64%	**Social Non-Problem Gamblers**	88%
Some Problems	10%	**Some Problems**	4%
Severe Problems	5%	**Severe Problems**	1%

Source: Alberta Alcohol and Drug Abuse Commission 1999c: 1.

"conduct a comprehensive legal and factual study of the social and economic implications in the United States," (NGISC 1999b) in practice the socially conservative six viewed the commission as an opportunity to air gambling's dirty laundry, that is, the enormous social costs that allegedly accrue from allowing adults to do what they want with their own money. For example, several commissioners began the study with a view of the lottery industry as a major evil.

Unexpectedly and unintentionally, the presidential commission report put to rest many of the myths propagated about gambling. Overall, if one wades through all 1,300 pages (NGISC 1999a, 1999b) one finds that a series of predictable, unalarming findings are lost amidst a sea of hyperbolic verbiage.

Table 15 compares five NGISC-funded studies that estimate the rate of problem gamblers per 100,000 people in the American population. Among the different studies, lifetime pathological gambling has a minimum value of 0.8 (NORC 1999a) and a maximum value of 1.6 (Harvard Meta-Analysis).

Based on criteria developed by the American Psychiatric Association, the National Opinion Research Center (NORC) estimated that approximately 2.5 million adults (0.8 percent) are pathological gamblers and 3 million adults (1.3 percent) are problem gamblers. Furthermore, NORC identified approximately 15 million adults "at risk" for problem gambling, 148 million adults who would be considered low-risk gamblers and 29 million—or one in seven—who have never gambled. The National Research Centre (NRC) of the National Academy of Sciences found results similar to those of the NORC study. The NRC estimated the lifetime rate of pathological gambling at 1.5 percent of the adult population, or approximately three million people. In addition, in any given year 0.9 percent of all American adults (approximately 1.8 million people) meet the necessary criteria to be categorized as "past year pathological gamblers." The NRC estimated that another 3.9 percent of adults (7.8 million people) meet the "lifetime" criteria for problem gambling, and that two percent (four million) people meet "past year" criteria (NGISC 1999b).

When testifying before the NGISC, Shaffer observed that the percentage of people with gambling problems has risen in the last 20 years. He then made a second, crucial point about legalized gambling:

> Observers tend to think that disordered gambling is growing in direct proportion to the expansion of legalized gambling opportunities. This may not be an accurate perception. Gambling certainly has expanded much more rapidly than the rate of disordered gambling (Berenson 1998a: 4).

Table 15: Comparison of problem pathological gambling prevalence rates per 100,000 of general adult population in the United States

	University of Michigan (1976)		Harvard Meta-analysis (1997)		National Research Council (1999)	
	Rate	Category	Rate	Category	Rate	Category
Lifetime	0.77	Probable Compulsive	1.60	Level 3	1.5	Level 3
	2.33	Potential Compulsive	3.85	Level 2	3.9	Level 2
Past year	—	—	1.14	Level 3	0.9	Level 3
	—	—	2.80	Level 2	2.0	Level 2

	NORC RDD/ Patrons Combined		NORC RDD (1999)	
	Rate	Category	Rate	Category
Lifetime	1.2	Pathological	0.8	Pathological
	9.2	At risk & Problem	9.2	At risk & Problem
Past year	0.6	Pathological	0.1	Pathological
	3.6	At risk & Problem	2.7	At risk & Problem

Notes: **level 3** = disordered gambling that satisfies diagnostic criteria; **level 2** = pattern of gambling that is associated with adverse consequences but does not meet criteria for diagnosis as a pathological gamblers; **at risk** = 1 or 2 criteria and lost more than $100 in a single day; **problem gambler** = 3 or 4 DSM-IV criteria and lost more than $100 in a single day; **pathological gambler** = 5 or more criteria and lost more than $100 in a single day; **RDD** = household telephone survey; **RDD/Patrons combined** = household telephone survey and interviews with patrons of gaming venues. The study by the National Research Council used the same codes as the Harvard Meta-Analysis.

Sources: University of Michigan Survey Research Centre for Commission of the Review of National Policy toward Gambling (1976); Shaffer , Hall, and Vander Bilt 1997, *Estimating the Prevalence of Disordered Gambling Behavior in the US and Canada: A Meta-analysis*; National Research Council (1999), *Pathological Gambling: A Critical Review*; National Opinion Research Centre (1999), *Gambling Impact and Behavior Study.*

Shaffer also noted: "Pathological gambling is not considered a unique disorder, but rather a cluster of symptoms associated with other disorders" (Shaffer, Hall, and Vander Bilt 1997: 60). Tables 16 and 17 compare the rate of pathological and problem gambling and other disorders. It is interesting to note that the lifetime level of alcohol addiction is seven times that of pathological gambling.

Table 16: Comparing lifetime and past-year prevalence rates of adult psychiatric disorders

	Lifetime (%)	Past-year (%)
Gambling Level 3	1.6	1.1
Anti-Social Personality	2.6	1.2
Obsessive Compulsive	2.6	1.7
Drug Abuse/Dependence	6.2	2.5
Major Depressive Episode	6.4	3.7
Generalised Anxiety	8.5	3.8
Alcohol Abuse/Dependence	13.8	6.3

Source: Shaffer, Hall, and Vander Bilt 1997: 60.

Table 17: Comparison of pathological and problem gambling with alcohol and drug dependence and abuse in the American population (percent)

	Past-year (%)	Lifetime (%)
Pathological Gambling[1]	0.9	1.5
Alcohol Dependence[2]	7.2	14.1
Drug Dependence[2]	2.8	7.5
Pathological and Problem Gambling[1]	2.9	5.4
Alcohol Dependence and Abuse[2]	9.7	23.5
Drug Dependence and Abuse[2]	3.6	11.9

Source: NGISC. Sources for specific data shown in table: [1] Committee analysis of Shaffer, Hall, and Vander Bilt 1997; [2] Kessler et al. (1994), *National Comorbidity Survey* (NCS).

United Kingdom

Dickerson estimates the number of compulsive gamblers in the United Kingdom at approximately one percent of the adult population (or 300,000 Britons at the time of the estimate) (Munting 1996). This is consistent with the estimated prevalence of pathological gamblers in Canada, the United States, and Australia, as detailed above.

Socio-demographic overview of gambling consumption patterns

Canada

In 1999, 72 percent of Canadians participated in regulated gambling like lotteries, casinos and bingo or unregulated gambling like sports pools and bets with friends (Azmier 2000). From an economic perspective, consumer spending is limited by disposable income. This assumption is explained by a basic tautology: total income is equal to consumption plus taxes plus savings. In order to increase consumption of any good or service, one must reduce consumption of some other good or service, increase income, borrow, reduce savings, or some combination of these. This is true for the consumption of any good or service, including gambling.

In 1995/1996, Canada's adult population stood at 22.4 million and the Canadian gambling industry had gross gambling revenues of $17.1 billion (table 18). Therefore, at this time Canadian adults wagered $760 per capita.

An analysis by Statistics Canada determined that, in 1998, 77 percent of Canadian households reported expenditure on at least one gambling activity. High-income households spent more on gambling than lower-income households, although the amount represented less of their total income. For example, in 1998, 63 percent of low-income households spent an average of $315 on gambling, or 2.3 percent of their average pre-tax income (table 19). Meanwhile, 84 percent of high-income households spent 0.6 percent of their income on gambling, an average of $590 (Marshall 2000).

Another measure of participation in the gaming industry is a comparison of family expenditures on gaming and other purchases. Overall, the average Canadian household expenditure on all purchases in 1997 was $35,290. Canadian households spent, on average, $247 or 0.7 percent of total spending on games of chance. This is less than the average expended on other recreational activities or on alcohol and tobacco. The average Canadian household expenditure on recreation was $2,780 or 7.9 percent of household spending and $1,139 or 3.2 percent of household spending on alcohol and tobacco. (table 20)

Table 18: Total wagering and wagering per capita in Canada

	Total Gross Revenue (CDN$)	Per capita, age 18+ (CDN$)
British Columbia	1.7 billion	589
Alberta	2.7 billion	1,344
Saskatchewan	870 million	1,183
Manitoba	950 million	1,124
Ontario	5.9 billion	699
Quebec	3.4 billion	604
New Brunswick	530 million	913
Prince Edward Island	100 million	991
Nova Scotia	600 million	838
Newfoundland	410 million	947
Total	17.1 billion	760

Note: Gross revenues do not include pay-outs and prizes.

Sources: 1996 Canada Census; and *International Gaming and Wagering Business*, July 1997.

Table 19: Gambling participation and household income in Canada (1998)

Level of household income	Gambling Participation	Percent of total income
Under $20,000	63%	2.3%
$20,000 to 39,999	79%	1.4%
$40,000 to 59,999	81%	1.0%
$60,000 to 79,999	84%	1.0%
$80,000 and over	84%	0.6%

Source: Marshall 2000.

Table 20: Average Household Expenditure (1997)

	YK	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	CAN
Food	6,878	5,821	5,769	4,881	5,310	5,897	5,649	5,198	5,112	5,149	5,595	5,703
Shelter	11,713	11,168	9,830	7,342	8,217	11,691	7,950	7,308	8,124	7,627	6,554	9,869
Household Operation	3,268	2,419	2,539	2,121	2,106	2,502	1,882	2,249	2,363	2,252	2,047	2,284
Household Furnishings	1,735	1,418	1,572	1,245	1,263	1,469	1,090	1,197	1,244	1,169	1,106	1,335
Clothing	2,349	2,151	2,445	1,922	1,977	2,353	2,017	1,845	1,873	1,937	2,023	2,182
Transportation	7,323	6,570	7,130	6,652	5,923	6,821	5,009	5,907	5,501	6,182	5,097	6,204
Health Care	1,121	1,334	1,707	1,253	1,132	1,030	1,052	1,155	1,081	1,136	969	1,153
Personal Care	689	637	689	580	591	694	675	589	580	587	558	664
Recreation	3,934	3,298	3,568	2,649	2,671	2,909	2,264	2,316	2,215	2,215	2,090	2,780
Reading Materials	429	269	308	230	256	294	257	235	271	264	186	275
Education	380	622	743	535	545	792	487	516	787	670	785	659
Tobacco & Alcohol	1,854	1,234	1,370	1,239	1,166	1,058	1,124	1,047	1,069	1,097	1,191	1,139
Games of Chance (Net Amount)	244	187	255	265	290	239	278	233	251	212	242	247
Miscellaneous	896	1,041	896	801	718	888	574	598	660	553	511	795
Total Current Consumption*	42,813	38,171	38,820	31,715	32,165	38,637	30,309	30,394	31,130	31,052	28,955	35,290

Note: *Income taxes, insurance payments, and contributions have been excluded from total consumption.

Source: Statistics Canada.

Opponents argue that gambling is economically regressive; that is, that gambling revenues are disproportionately derived from the income of the poor and the uneducated. Upon closer inspection, however, the evidence is mixed. According to Statistics Canada's 1998 Household Expenditure Survey, the proportion of the lowest income group in Canada that has participated in at least one gaming activity (67 percent) is much lower than the proportion of the highest income group (87 percent) (tables 21a & 21b). Furthermore, although lower-income groups spend a higher proportion of their income on gaming activities, higher-income groups spend more in total. Therefore, the premise that the poor support the gaming industry is somewhat misleading and not entirely representative of actual consumer spending on gaming activities.

Another area of interest to researchers is the link between the availability of gaming opportunities and consumer expenditure. A study by Room, Tuner, and Ialomiteanu (1999) examined the effect of the introduction of the Niagara Falls casino on consumer spending. Overall, Niagara residents spent less on average ($36) on casino gambling than Ontario residents as a whole ($47). A significant number of respondents reported spending reasonable amounts (i.e., spending within their financial means). Of the respondents, 93 percent reported spending less than $100 per month and 94 percent reported spending less than five percent of their income on gambling. Although proximity to gaming facilities may increase participation rates, the availability of gaming facilities does not necessarily result in increased consumption of gaming activities.

Who gambles in Canada?

Baseline Market Research (1996a) examined the purchasing of lottery products among different demographic groups within the Nova Scotian population. They found a statistically significant relationship between age and the purchase of scratch tickets: the likelihood of scratch-ticket purchases decreased as the age of the sample increased. In other words, the oldest age group (65+) was the least likely to purchase scratch tickets on a weekly basis.

Overall, male and female purchasing patterns do not vary significantly: approximately 18 percent of men and women in Nova Scotia do not buy lottery tickets, nine percent have purchased them at some point but not in the last year, 41 percent have purchased them in the past year, and 32 percent purchase them on a weekly basis. Within this sample of Maritime gamblers, wagers ranged from $1 to $50,000. Overall, 49 percent of respondents indicated their largest wager was $10 or less; 73 percent reported the largest wager was $25 or less.

This study found that problem gamblers in Nova Scotia include a disproportionate number of men. The more elderly the respondent, the less likely he or she is to be

Table 21a: Percentage with gaming expenditures

	At least one activity	Government lotteries	Other lotteries and raffles	Casinos and slot machines	Bingo
Percentage of households with gaming expenditures					
All households	82	74	39	17	12
By income groups ($)					
Less than 20,000	67	59	18	8	13
20,000 to 39,999	81	73	32	15	14
40,000 to 59,999	87	78	46	19	12
60,000 to 79,999	88	81	53	19	13
80,000 & over	87	78	54	24	9
One person households	71	62	25	13	9
Percentage of men and women with gaming expenditures					
Men	75	65	26	14	4
Women	69	60	25	11	12
Percentage of persons with gaming expenditures, by educational level					
Less than high school	68	58	18	10	13
High school graduate	76	69	29	12	8
Post secondary	79	68	37	15	—
University	62	50	29	16	—

Source: Marshall 1998.

Table 21b: Average expenditures on gaming activities

	At least one activity	Government lotteries	Other lotteries and raffles	Casinos and slot machines	Bingo
Average expenditure per spending household ($)					
All households	423	239	70	359	677
By income group ($)					
Less than 20,000	296	159	39	456	479
20,000 to 39,999	370	216	57	247	623
40,000 to 59,999	444	264	63	315	758
60,000 to 79,999	484	266	72	467	641
80,000 & over	536	285	101	391	1,045
One person households	334	193	61	451	526
Average expenditure by men and women					
Men	416	264	79	710	464
Women	270	138	47	217	540
Average expenditure by educational level					
Less than high school	410	208	55	648	643
High school grad	319	216	65	375	332
Post secondary	257	156	63	275	—
University	245	126	59	398	—

Source: Marshall 1998.

classified as a problem gambler. Problem gamblers were more likely to have a high-school education or less, and were less likely to be married, compared to the overall sample of gamblers. Forty-six percent within the overall sample of gamblers, but 58 percent of those classed as problem gamblers, had incomes under $30,000.

Baseline Market Research (1996b) also conducted a province-wide telephone survey for the New Brunswick Department of Finance. The study identified the typical problem gambler in New Brunswick as a single, unemployed, francophone male under the age of 44 with, on average, no more than a high-school education. He probably began his gaming activities around the age of 22 through card games and was involved in more than one wagering activity weekly.

In Ontario, a study by the Addiction Research Foundation (Ferris, Stirpe, and Ialomiteanu 1996] found that respondents in two of the youngest age groups (particularly those aged 18 to 29 years) had a higher propensity to gamble, were more likely to have gambled in the last month, were more likely to be involved in multiple gambling activities, and preferred to gamble on sports or VLTs. Younger gamblers also tended to be in the highest categories for frequency and spending as they gambled at least weekly and spent at least $100 per month on gambling. Other findings showed that men were more likely to gamble than women and to have gambled in several different activities, and tended to spend more and gamble more regularly than women.

The National Council on Welfare (1996) described a typical Canadian problem gambler as an unmarried man under the age of 30. However, beyond these two defining characteristics, there is no clear profile of a problem gambler. A number of provincial studies have found that there are groups within the population that have a higher risk of becoming problem gamblers but the risk is never guaranteed as many problem gamblers do not fit these characteristics.

United States

In 1998, Americans spent approximately US$7 billion on movie tickets, US$26 billion on books, and US$450 billion on groceries. American gamblers wagered more than US$630 billion legally on state lotteries, casinos, slot machines, video poker and keno, and other forms of gaming. They lost US$50 billion in the process (Will 1999). According to Arthur Anderson (1996), spending on recreation increased from US$43.1 billion in 1970 to US$339.9 billion in 1993. Of the increased spending on recreation, only a small portion is attributable to incremental spending on casino gaming. For example, between 1990 and 1993 the increase in spending on recreation was approximately US$54.2 billion while the increase in gaming revenues was approximately US$3.2 billion during the same period. Table 22 compares personal consumption expenditures in the United States in 1970 and 1993:

Table 22: Personal consumption expenditures in the United States, 1970 and 1993 (1987US$millions)

	1970		1993	
	$	%	$	%
Miscellaneous	127.2	7	213.2	6
Food	431.0	24	553.6	16
Clothing	107.8	6	241.5	7
Housing	508.5	28	947.7	27
Medical care	208.7	12	523.0	15
Other services	119.5	7	271.1	8
Transportation	219.5	12	410.5	12
Recreation	91.3	5	304.1	9
Total	1,813.5		3,458.7	

Sources: *Statistical Abstract of the United States, 1995*: 458, table 709; *Statistical Abstract of the United States, 1993*: 442, table 699.

Who gambles in the United States?

NORC (1999) identified the prevalence of at-risk, problem and pathological gamblers within specific demographic groups. Although the sample sizes are small, the study provides an approximation of the proportion of each subgroup at risk or having problems with gambling. For example, lifetime pathological gamblers are more likely to be Black males aged 50 to 64 years with less than high-school education. They are more likely to be divorced, separated, or never married, employed full-time, and living within 50 miles of a casino. Players in the lifetime-at-risk category tend to be Hispanic males aged 18 to 29 years with less than high-school education. They tend to have incomes above $50,000 a year and are more likely to be divorced, separated, or never married (table 23).

On average, Americans with relatively high income and educational levels, like their Canadian counter-parts, spend more on, for example, lottery tickets than people with relatively low income and educational levels. However, poorer people spend proportionally more of their earnings on lottery tickets (Douglas 1995: 346).

Table 23: Prevalence of lifetime and past-year gambling problems by demographic group (percent)

Demographic group	At-Risk (*n*=267)		Problem (*n*=56)		Pathological (*n*=67)	
	Lifetime	Past-year	Lifetime	Past-year	Lifetime	Past-year
Sex						
Male	9.6	3.9	2.0	0.9	1.7	0.8
Female	6.0	2.0	1.1	0.6	0.8	0.3
Race						
White	6.8	2.7	1.4	0.6	1.0	0.5
Black	9.2	4.2	2.7	1.7	3.2	1.5
Hispanic	12.7	3.7	0.9	0.7	0.5	0.1
Other	8.8	1.8	1.2	0.5	0.9	0.4
Age						
18–29	10.1	3.9	2.1	1.0	1.3	0.3
30–39	6.9	2.1	1.5	0.8	0.6	0.6
40–49	8.9	3.3	1.9	0.7	1.4	0.8
50–64	6.1	3.6	1.2	0.3	2.2	0.9
65+	6.1	1.7	0.7	0.6	0.4	0.2
Education						
Less than HS	10.0	2.4	1.7	1.2	2.1	1.0
HS Graduates	8.0	3.5	2.2	1.1	1.9	1.1
Some College	7.9	3.5	1.5	0.8	1.1	0.3
College Graduate	6.4	2.0	0.8	0.2	0.5	0.1
Income						
Less Than $24,000	7.3	2.6	1.6	0.7	1.7	0.9
$24,000–$49,000	6.9	3.2	1.8	0.9	1.4	0.6
$50,000–$99,900	8.0	2.5	1.3	0.7	0.9	0.2
$100,000+	13.4	4.9	1.4	0.4	0.7	0.2
Marital status						
Married	5.9	1.9	1.0	0.8	1.0	0.3
Divorced/Separated	9.9	4.7	1.7	0.9	3.0	1.7

Table 23 continued

Demographic group	At-Risk (*n*=267)		Problem (*n*=56)		Pathological (*n*=67)	
	Lifetime	Past-year	Lifetime	Past-year	Lifetime	Past-year
Never Married	11.4	4.3	2.6	0.8	1.2	0.7
Cohabiting	6.8	3.2	1.2	0.2	0.8	0.0
Widowed	7.3	1.7	0.5	0.0	0.0	0.0
Minor children						
None	7.7	3.1	1.6	0.7	1.0	0.5
One or More	7.8	2.7	1.3	0.9	1.6	0.6
Employment						
Full-time	8.5	3.0	1.5	0.7	1.5	0.6
Part-time	5.3	2.1	0.3	0.0	0.8	0.6
Not Employed	7.3	3.2	2.1	1.0	1.0	0.4
Region						
Northeast	8.8	2.9	0.8	0.0	0.4	0.0
South	5.9	2.2	1.1	0.6	1.2	0.4
Midwest	6.0	2.7	1.6	0.7	1.5	1.0
West	12.1	4.3	2.3	1.4	1.4	0.6
Lottery state						
No	4.6	2.9	1.4	0.7	1.5	0.2
Yes	8.3	2.9	1.5	0.7	1.2	0.6
Distance to casino						
0–50 miles	7.4	4.1	2.3	1.1	2.1	1.3
51–250 miles	8.5	2.6	1.2	0.6	0.9	0.3
251+ miles	5.5	2.6	1.2	0.3	1.3	0.4
Professional gambler						
No	7.6	2.9	1.5	0.7	1.1	0.5
Yes	19.2	11.4	2.9	7.2	19.8	10.4

Source: NORC 1999a: 26.

In 1998, NORC (1999b) interviewed 534 American youths. The survey results showed that adolescents tend to gamble less often than adults: approximately one-third of youths aged 16 to 17 years have never gambled, compared to less than one-seventh of adults. The most striking difference between adult and adolescent gambling is that a majority of adolescent gambling is composed of private betting on games of skill, particularly card games. The data also show that youths aged 16 to 17 years wager smaller amounts of money compared to adults. For example, approximately 22 percent of adults, but only about two percent of youths, have lost more than $100 on a single day of gambling.

The survey by NORC (1999b) found that there is not a statistically significant difference between men and women gamblers, although men are more likely to be pathological, problem, and at-risk gamblers than are women. Despite equal proportions of men and women having gambled in their lifetimes, the percentage of women who have gambled has increased over recent years by almost 20 percent, whereas the percentage for men has increased by only 10 percent. Table 24 shows the proportion of gamblers by sex who have gambled in their lifetime and in the past year.

Australia

According to Dickerson and Baron (1998), Australians spend over AUS$10 billion each year on gambling, about three percent of household disposable income. This compares to annual household expenditures of approximately AUS$6 billion on gas, electricity, and fuel, AUS$9 billion on household appliances, and AUS$13 billion on alcoholic beverages. This AUS$10 billion represents annual net losses, that is, the amount wagered less any winnings. Given that players have a tendency to re-wager their winnings over time, the actual turnover of the gaming industry is estimated between AUS$70 billion and AUS$80 billion per year. Interestingly, per-capita spending on gaming among adults in Australia is, on average, AUS$700, which is less than per-capita spending on gaming in Canada.

In contrast to spending by North American consumers, Australians appear to spend more per capita on gambling than on other recreational activities. This is not surprising

Table 24: Gambling during lifetime and past-year, by sex (1998)

	Lifetime (percent)	Past year (percent)
Men	88	67
Women	83	60

Source: NORC 1999b: 8.

considering that Australians appear to have a more tolerant disposition toward gambling as a recreational pastime. According to the figures presented by the Australian Retailers Association (1998), between 1989 and 1996, per-capita expenditures on gambling increased by AUS$251. This compares to a per-capita increase of AUS$93 for other recreational activities during the same period (table 25).

When broken down into income quintiles, the proportion of average household spending on recreation that is devoted to gambling is relatively low (table 26). For example, households within the lowest income quintile spend 23 percent of their average weekly expenditures on entertainment and other recreational services, compared to 16 percent of expenditures on gam[bling. Another interesting outcome in the data presented in table 26 is that lower-income households allocate a higher percentage of their weekly recreation spending to gambling than do higher-income households.

A report by ACIL Consulting (1999) found that lower-income households spend a higher proportion of their income on lottery games per week than households in the highest income quintile while higher-income households spend more of their weekly gambling expenditures on EGMs and casino gaming. Although households in the lowest income quintile allocated the highest proportion of their total weekly expenditure to gambling in 1993/1994, in dollar terms this group spent the least. Conversely, in 1992, the highest-income earners spent the smallest proportion of their total weekly expenditure on gambling but the most in dollar terms.

Table 27 reveals an interesting trend in the percentage share of household spending compared to household income. Household expenditures on retail and other services show a marginal increase between 1989 and 1996. Gambling expenditures have also increased during this same period. What is interesting about the data is that savings as a percentage share of household income has declined between 1989 and 1996 from 6.7 percent to 2.5 percent. This decrease in savings is partially attributable to an increase in consumer spending on gambling.

In this vein, the Productivity Commission (1999) cited a report on the Australian state of Victoria by NIEIR (1997), which concluded:

> Up to 1995-96 . . . new gambling expenditure largely represents new expenditures in the Victorian economy that would not otherwise have been made. This is in contrast to earlier methodologies applied by NIEIR in gambling studies which argued that expenditures of Victorian residents on new gambling activities that would largely represent displacement of other forms of expenditures. (NIEIR 1997a: 79; cited in Productivity Commission 1999: 5.19)

Table 25: Australian retail sales and gambling expenditure

	1989/1990	1992/1993	1995/1996
Retail Sales[1] ($m)	73,616	83,850	99,574
Retail Consumption[2] ($m)	88,393	101,223	123,535
Retail Services[3]	16,270	16,761	21,171
Retail Industry share of retail consumption (%)	83.3	82.6	80.6
Per capita measures ($ per capita)			
Retail sales	*4,347*	*4,757*	*5,481*
Gambling expenditures	*266*	*337*	*517*
Food retailing	*1,967*	*2,241*	*2,670*
Department retailing	*580*	*606*	*637*
Clothing	*436*	*449*	*453*
Household goods	*626*	*643*	*721*
Recreational	*291*	*307*	*384*
Other retail	*447*	*510*	*615*
Income Measures (% of HDI)			
Retail sales	31.7	31.7	32.0
Retail food	14.3	14.9	15.6
Retail non-food	17.3	16.8	16.4
Retail services	7.0	6.4	6.8
Gambling expenditure	1.9	2.2	3.0

Notes: [1] Retail services = total turnover excluding hospitality and services. [2] Retail consumption = retail components of private consumption expenditure. [3] Retail services = hospitality and service industries from the Retail Trade Survey.

Source: Australian Retailers Association 1998. Sources for data: Australian Demographic Statistics (ABS Cat. 3101.0); Retail Sales & Consumption (ABS private communication); State Accounts ANA (ABS Cat. 5220.0).

Table 26: Average weekly expenditure on recreational goods and services categories as a proportion of total expenditure on recreation by household income quintiles (divisions of 20% of population), 1993/1994

	Lowest quintile	2nd quintile	3rd quintile	4th quintile	Highest quintile
Television, other AV equipment	19%	22%	25%	26%	24%
Books, newspapers, magazines, etc.	16%	15%	13%	13%	13%
Other recreational equipment	15%	13%	18%	15%	19%
Gambling	16%	14%	10%	8%	6%
Animal charges, expenses	11%	11%	11%	10%	9%
Entertainment, recreational services	23%	25%	23%	29%	29%

Source: ABS, 1996, Cat No 6535.0.

Table 27: Share of household expenditure compared to household income (percent)

	1989/ 1990	1990/ 1991	1991/ 1992	1992/ 1993	1993/ 1994	1994/ 1995	1995/ 1996
Retail	38.0	37.8	38.2	38.4	38.8	39.7	39.7
Services	53.4	54.6	55.1	55.8	55.7	55.8	54.8
Gambling	1.9	2.1	2.1	2.2	2.5	2.9	3.0
Savings	6.7	5.6	4.6	3.6	2.9	1.6	2.5

Source: *National Institute of Applied Economic and Industry Research*, 1997.

Who gambles in Australia?

Dickerson, Allcock, Blaszczynski, Maddern, Nicholls, and Williams (1998) examined a number of gender-based characteristics of gamblers in New South Wales. The study found: 27 percent of male respondents and 26 percent of female respondents did not gamble at all; 38 percent gambled weekly; 15 percent gambled monthly; and 20 percent gambled infrequently. In terms of expenditure on gambling, on average

men spend twice as much as women. The Australian Medical Association (1998) found that men and women gamble for different reasons and have preferences for different forms of gambling. Although both men and women appreciate the social atmosphere provided by gambling, men tend to enjoy the "thrill" of gambling while women derive pleasure from the opportunity to relieve boredom and loneliness in a safe, social environment.

One assertion made by opponents of gambling is that most problem gamblers are single, under-educated, and unemployed. Contrary to this belief, data from Tasmania reveal that 65 percent of problem gamblers are employed. In Australia, at least, the occupational group with the highest representation is clerical (Tasmanian Gaming Commission 1998b). As for marital status, the data show that of all the problem gamblers receiving treatment in Tasmania over a 16 month period, 57 percent were either married or in common-law relationships, and only 24 percent had never been married.

United Kingdom

Although both consumer expenditure and expenditure on gambling have increased, between 1969 and 1990 the proportion of consumer expenditure devoted to gambling decreased after 1974/1975 (table 28). These figures do not include the amount of money allocated to charitable gaming; rather, they provide an estimate of what consumers are willing to spend for gaming activities. In 1992, combined annual expenditure on raffles, lotteries, soccer betting pools, and street and door-to-door collections totaled between £1.6 billion and £1.9 billion (Munting 1996).

The introduction of a national lottery in the early 1990s has not sparked a marked increase in consumer expenditure on gambling. Before its introduction to the British gaming market, 70 percent of Britons already gambled, spending £7 per capita per week. Soccer betting pools represent the most popular form of gambling: in 1991 they boasted 16 million customers and contributed £554 million in revenue to the coffers of the British government. The real concern about the national lottery lies with rent-seeking soccer pools operators who fear that they could lose up to 30 percent of their business to lottery ticket purchases.

Casinos are another form of gambling found in the British marketplace. In a casino, the "drop" is the amount of money that patrons exchange for gambling chips and, thus, an approximation of the expenditure on casino gaming. Table 29 shows the "drop" in casinos from 1972 to 1990/1991. Although who can play and the availability of casinos is highly restricted, it appears that the British still enjoy casino gambling: spending in British casinos increased from £225 million in 1972 to £1,936 million in 1991.

Who gambles in the United Kingdom?

It is estimated that approximately 30 million people regularly play the twice-weekly National Lottery, which represents approximately 68 percent of the adult population. Overall, surveys show that adult participation in the gambling industry has increased from 50 percent in 1974 to 70 percent in 1989, although the substantial increase may be attributed to a broader definition of gambling used in the later survey. Table 30 presents an estimate of the percentages of Britons who participate in the gaming industry by type of gaming activity and specific demographic groups. The data show that, overall, men prefer betting, sports pools, and gaming machines and women appear to prefer bingo to other forms of gambling. Lotteries are popular with both men and women. When broken down into socioeconomic groups, skilled workers seem to favour all forms of gambling and have an overall higher participation rate than any other social class. Interestingly, the social classes with the lowest overall participation rate are professionals, the unemployed, and pensioners.

Table 28: Estimates of gambling expenditure in the United Kingdom as a percent of total consumer expenditure, 1969 to 1990 (£m)

	Total gambling	Consumer expenditure	Percent
1969/1970	1,290.8	32,114	4.1
1972/1973	2,350.0	40,750	5.8
1974/1975	2,699.7	66,125	4.1
1979/1980	5,060.7	139,608	3.6
1984/1985	6,548.7	217,618	3.0
1989/1990	8,970.9	349,421	2.6

Notes: From 1969 on, includes fixed odds on football but excludes casino gaming. From 1969 on, Customs and Excise data including bookmaking and football pools but, from 1989 on, on-course betting excluded as no longer subject to taxation. From 1972/1973 on, estimates for gaming and bingo figures are included (from Gaming Board's data) and, for 1972/1973 only, estimated gaming on machines. From 1977/1978 on, lotteries were included. Hence, none of this data is comprehensive of all gambling activity (save, possibly, for 1972/1973) and comparisons over time are limited.

Sources: Churches Council on Gambling, *Annual Reports*; HM Customs Excise, *Annual Reports*, Gaming Board of Great Britain, *Annual Report;* Central Statistical Office, *Economic Trends*, annual supplement (1992): 35, 128; C.H. Feinstein (1972), *National Income and Expenditure in the UK, 1855–1965* (Cambridge University Press).

Table 29: Gambling expenditure in British casinos, 1972 to 1990/1991 (£m on all games)

	Drop*	Win by casino (%)
1972	225	—
1973/1974	297	—
1974/1975	351	—
1975/1976	477	—
1986/1987	1,622	20
1987/1988	1,722	19
1988/1989	1,720	18
1989/1990	1,881	18
1990/1991	1,936	18

Note*: The "drop" is the amount of money exchanged for gambling chips in a casino and represents expenditure.

Source: The Gaming Board of Great Britain, *Annual Report*s.

Table 30: Participation in gambling markets in the United Kingdom, 1974 to 1989 (%)

	Sample		All Gambling		Betting		Pools		Bingo		AWP*		Lotteries	
	1974	1989	1974	1989	1974	1989	1974	1989	1974	1989	1984	1989	1984	1989
All	100	100	50	70	13	14	36	36	15	17	22	16	55	30
Male		48	57	52	66	68	68	62	31	35	65	63	47	49
Female		52	43	48	32	32	31	38	69	65	35	36	53	52
Age														
15 to 19		11	7	11	8	12	4	4	18	19	20	30	11	10
20 to 24		9	9	10	15	12	7	7			14	20	7	10
25 to 34		17	20	17	20	21	21	16	19	11	20	21	20	21
35 to 44		16	18	18	18	19	19	20	14	18	15	15	16	20
45 to 54		14	21	14	12	12	22	18	23	13	13	5	14	15
55 to 64		14	14	15	12	11	11	17	10	20	6	3	17	13
Social group														
Professional/Managerial		14	11	17	7	14	9	9	5	3	13	12	17	17
White-collar		23	23	21	21	20	24	21	18	16	21	21	23	24
Skilled Blue-collar		30	36	33	29	34	37	34	36	35	40	37	33	32
Unskilled Blue-collar		19	24	20	33	18	22	22	29	20	19	20	18	17
Unemployed/ pensioner		15	7	14	8	16	6	14	12	26	9	8	10	10

Notes: Data are based on surveys in 1974 and 1989, for AWP machines and lotteries, surveys in 1984 and 1989; betting is that with bookmakers and tote; pools are football pools; AWP means amusement-with-prize machines; lotteries include raffles, tombola, etc.; casino gaming and gaming machines are not included as they were patronized by a small range of social groups.

Source: Mintel (1990), Gambling, passim, *Leisure Intelligence* 3, 6 (London: Mintel).

Social benefits and costs of gambling

Social benefits

It is difficult to quantify the social benefits derived from gambling. How does one assign a dollar value to the utility or benefit that one receives from entertainment, socializing, or a break from one's daily work routine?[2] Given the difficulty in quantifying these benefits, research in the area of social costs and benefits tends to be qualitative rather than quantitative in nature, frequently relying on anecdotal rather than empirical evidence.

In our view, gambling may be considered a recreational outlet, similar to entertainment and leisure products and services. Those who participate in gambling activities do so *voluntarily* and, in return, receive intrinsic benefits from their consumption. Furthermore, if consumers are gambling for entertainment purposes, they are purchasing gambling just as they would purchase tickets for the cinema or a symphony. For example, the Golden Casket lottery in Australia provides a low-cost source of entertainment to a number of people in the Australian state of Queensland. In fact, over any 12-month period, close to 89 percent of the adult population will purchase a lottery product of some description (Golden Casket Lottery Corporation Ltd. 1999). This may be considered a relatively harmless form of entertainment that provides a recreational outlet for participants.

Australia's Mental Health Foundation (1998) suggests that gambling may be exciting and socially engaging. For those who enjoy taking risks, the propensity for risk associated with gambling may be both stimulating and challenging. Within this charged environment, individuals become part of a world away from the burden and drudgery of their daily routine. Adults find themselves at play, interacting and socializing in a safe environment amongst their peers. For others, gambling is stimulating due to the challenge of estimating potential wins and losses, especially with sports betting and horse racing. Overall, people gamble for a variety of reasons,

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[2] The most credible recent attempt to quantify the social benefits of gambling puts the figure at $2 billion annually (see Vaillancourt and Roy 2000).

whether for a break from their daily lives, the thrill of the chase, or the challenge of beating the odds. Each individual gambles for a different reason and derives pleasure from the activity according to his or her own individual measure of utility.

The Friedman-Savage utility model recognizes the important point that, while most people tend to be risk-averse, there are those who are risk-preferring over certain income ranges; that is, they are willing to take a risk—to gamble—to increase their wealth. Two studies have assessed aspects of the Friedman-Savage model in the context of gambling. Pryor (1976) analyzed gambling from a cross-cultural perspective and found a "positive correlation between socioeconomic inequality and the presence of gambling" (Rosecrance 1998: 64). In 1981, Gregory Brunk analyzed data collected by the 1976 Survey Research Study and concluded that dissatisfaction with current income was significantly related to the purchase of lottery tickets but not to other forms of gambling. For the three types of gambling analyzed (poker, sports, and bingo), the more satisfied individuals were with their income, the more they tended to gamble. According to Friedman and Savage, for willing gamblers, as they advance to a higher socioeconomic group, the marginal utility of income increases as winnings from gambling increase. In other words, for those who choose to gamble, the small sum risked for the expected return of a large sum of money is justified by the opportunity of financial gain that a person would not have otherwise had the opportunity to obtain.

Unfortunately, most gambling critics discount the enjoyment derived from games of chance and, instead, consider the anticipated monetary returns from gambling to be the most important outcome. However, G. Calvert recently provided the reminder: "Utility functions are the bread and butter of 'subjective expected utility' theory, which quite simply assumes that people make decisions according to the expected value of their utility function" (1999a). Hence, as Calvert notes:

> Our understanding of trade itself turns on the observations that people very often value things differently. Both parties to an exchange expect to increase their utility, or feel better off; thus trade is a positive-sum game. Indeed, were it otherwise, voluntary exchange would never take place. (1999a)

Alfred Marshall, one of history's great economists, popularized the concept of "consumer surplus." Consumer surplus refers to the difference between what consumers are willing to pay for a product and the price they are required to pay. The size of the benefit derived from the purchase equals the difference between the consumer's value of the product and the amount actually paid for it. Consumer surplus exists because people are willing to pay more for a product than they are required to pay. In the gambling market, consumer surplus measures the willingness of consumers to purchase gambling products in excess of cost, reflecting a benefit to the consumer involved.

If consumers are willing to purchase products and producers choose to provide it, presumably they do so because there is a net benefit to both consumers and producers. In Australia, the Productivity Commission (1999) estimates that the consumer surplus for gambling is AUS$8 billion to 11 billion per year (1997/1998). However, when adjusting the benefit to allow for the social costs accruing from problem gambling, this amount is reduced to approximately AUS$5 billion to 6 billion per year.

An exploratory study by Sterling Research (1998a) employed a series of focus groups to examine Nova Scotia's gaming industry. Among the focus group participants, entertainment was the most prevalent reason for gambling, followed by socializing. Those who frequented bingo halls and casinos believed that mingling was an important reason for participating in this form of gaming. The following were considered benefits to the family unit: diversions from daily pressures, family entertainment, and the maintenance of family relationships. Participants suggested that their work also benefits from gaming, because employees who participate in gaming find relief from their work routine, experience stress reduction, and an increase in group solidarity.

Casino gaming is particularly attractive to many individuals because it is conducted in a self-contained environment, different from other social outlets. As Thompson (1994) suggests, casinos provide self-contained, crowded, party-like environments clearly separate from ordinary day-to-day activities where people can meet, socialize, and play. In general, the ambiance is more formal and business-like than taverns or lounges, and a dress code may apply (MPM Gaming Research 1998). Casino gambling also tends to attract occasional players who visit casinos periodically for entertainment and excitement. For others, casino gaming relieves tensions brought on by the stress from everyday life, as regular attendees view the social world of the casino as a familiar place where they can feel at home. Rosecrance argues that such a perspective follows the sociological model of Tomatsu Shibutani, who described the security of social worlds in a manner that may be applicable to casino gaming: "Each is an arena in which there is some structure which permits reasonable anticipation of the behavior of others, hence an arena in which one may act with a sense of security and confidence" (Rosecrance 1998: 82).

Within the gaming arena, there are opportunities for gamblers to gain both self-esteem and public esteem, although they may be losing money. Through gambling, participants gain an opportunity to test their skill in games of chance and to derive intrinsic pleasure from the thrill of the activity itself. One of gambling's main attractions appears to be the entertainment value of the activity involved. As Erving Goffman explained:

The ritual involves *squaring off*, in which a challenge is presented and rules are set; *determination*, the actual play producing an outcome; *disclosure*, the brief but suspenseful period of time between completion of play and participants' realization of the result; and finally the *settlement*, in which the players acknowledge the result. (Goffman 1967; cited in Smith 1996: 107).

For many years, gambling has benefited society in the form of charitable gaming. Overall, it appears that a society is more tolerant and accepting of gaming when it is for the benefit of a popular social cause. Why is participation in charitable gaming so popular? According to Douglas (1995), charitable gaming provides consumers with a "win-win" situation. Not only do participants have an opportunity to partake in a gaming activity, they also gain the potential to win a sum of money or prize while being assured that they are supporting a worthwhile cause.

Social costs

> *Legalized gambling is a growing problem in many communities … Places that have tried it have found that it breeds crime, corrupts public officials, destroys families and increases gambling addiction.*
>
> Gary Bauer[3]

Despite the relatively small number of cases of pathological gambling, there are social costs attributable to those people who are unable to control their gambling behaviour. The social costs of gambling may be defined more precisely within specific cultural contexts. In countries such as Australia, for example, a more tolerant attitude toward gambling may be reflected in a lower estimate of the social costs of gambling. In Canada, meanwhile, there has been comparatively little empirical research conducted into the social costs of gambling and, as a result, most of the evidence from Canada is anecdotal in nature. In the United States, increased public awareness about the effects of gambling has resulted in a number of studies that attempt to quantify its social cost. Despite these efforts, research from the United States also tends to be disproportionately qualitative in nature.

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[3] www.frc.org/radio/c97110.html. Gary Bauer, one of America's most prominent social conservatives, is a former domestic policy advisor to President Ronald Reagan, a former presidential candidate (2000), and, currently, Executive Director of the Family Research Council, Washington, DC.

Canada

The exploratory study by Sterling Research (1998b) of Nova Scotia's gaming industry observed participants who felt that any activity that interferes with a person's personal and professional responsibilities has a negative impact on the family. These responsibilities may include spending time with family, attending work, paying bills, and giving attention to children.

In Ontario, the inquiry into gambling as a social problem by the Addiction Research Foundation included a survey of 1,031 adults who answered questions about the severity of several behaviours that may be considered social problems. These behaviours are smoking, heavy drinking, drug addiction, heavy gambling, and swearing in public. The respondents rated each social problem according to the following scale: (1) not at all serious; (2) somewhat serious; (3) serious; and (4) very serious. Drug addiction was ranked as the most serious problem by 16 percent of respondents, heavy drinking by 12 percent, smoking by 9 percent, gambling by only 3 percent, and swearing in public by just one percent (Ferris, Stirpe, and Ialomiteanu 1996). Overall, it appears that Ontario residents find that drug addiction, heavy drinking, and smoking are more harmful to society than gambling.

When deciding whether to introduce a casino into the gaming market, the Vancouver Board of Trade (1994) heard testimony from representatives of the United Church of Canada, the Anglican Church, and the Baptist Church, none of whom wanted expanded gaming. In their opinion, on behalf of their respective Christian faiths, both commercial and State-sanctioned gaming activities are deemed morally repugnant. Why? Gambling allegedly erodes the moral and social fiber of a community or society. It was alleged that, in practice, people who gamble regularly become motivated by greed, promoting a negative value that suggests one can get "something for nothing" at one's neighbour's expense.

United States

Among American opponents of gambling, some argue that it has an especially negative impact on the working class because it undermines the capitalist work ethic. To theorists of this opinion, gambling is in conflict with the central characteristics of capitalism: rationality; disciplined work habits; prudence; thrift; industry; methodical adherence to routine; and well-earned gains. A lust for sudden wealth disconnected from the process of making society more productive is viewed as perverse. Government support of gambling, whether through legalization or direct operation of the state, thereby encourages the pursuit of wealth without work (Dombrink and Thompson).

Nevertheless, gambling in America, as in Canada, is a voluntary and relatively harmless activity. Most people who participate in this popular American pastime do

so willingly and without experiencing adverse effects. Although there are people who experience problems with gambling, they represent a very small proportion—approximately one percent—of the population.

In more specific terms, last year NORC (1999) investigated the changes of various social indicators in communities proximate to newly opened casinos. NORC found that per-capita rates of bankruptcy, leading health indicators, and levels of violent crime *did not* change significantly as a result of proximity to a casino. Meanwhile, unemployment rates, welfare outlays, and unemployment insurance expenditures declined by 15 percent. Overall, per-capita income remained the same.

The relationship between gambling and suicide is much debated. Critics argue that gambling environments allow excessive individual freedom that promotes individual isolation and self-destructive behaviour. Supporters of gambling argue that gambling environments are heavily regulated, and provide social integration through entertainment and recreation.

An article by David P. Phillips published in the journal *Suicide and Life Threatening Behavior* claimed that gambling may be accompanied by an increase in suicides. Research by McClearly and Chew (1998) directly addressed Phillips' contention. Contrary to Phillips, McClearly and Chew report: "Our investigation shows that when standard methodology is employed, and when the masking effects of extraneous factors (such as population growth, age structure, and visitor volume) are removed, suicide levels in US casino resort areas are about average compared to non-gaming areas" (1998: 2). The authors concluded: "In the five counties where gambling was legalized during 1978–95, including Atlantic City, before/after differences are not statistically significant, and, moreover, are no larger than the differences from control counties. Resident-suicide rates neither rise nor fall when gambling is legalized" (1998: 19). Of all deaths recorded in the United States for 1995, 1.4 percent of all deaths are attributable to suicides (table 31). A recent study by Blaszczynski and Farrell (1998) provides further insight into the alleged association between gambling and suicide. Overall, Blaszczynski and Farrell did not find any conclusive evidence that gambling was "the major or sole contributing risk or predicting factor to suicide" (see table 32).

Another social cost commonly attributed to gambling is that problem gamblers tend to have higher levels of debt, and declare bankruptcy at higher rates, than non-problem gamblers and non-gamblers. NORC (1999) found that pathological gamblers owe US$1.20 for every dollar of annual income, while low-risk gamblers owe only US$0.80, and non-gamblers only US$0.60, per dollar of annual income. Not only do pathological gamblers incur a higher level of debt than low-risk gamblers, they also

Table 31: Cause of death by visitor status: residence versus occurrence

Cause of Death	Percent of all deaths	Same county	Same state	Different state	Percent visitor
Heart disease	31.9	616,478	96,964	25,126	3.4
Cancers	22.4	436,691	66,988	14,976	2.9
Artery disease	9.2	173,137	34,045	6,906	3.2
Pulmonary disease	4.4	86,098	142,292	2,613	2.5
Motor Vehicle	1.9	25,905	13,088	4,647	14.6
Suicide	1.4	27,089	3,098	1,142	3.6

Source: McClearly and Chew 1998: 45.

Table 32: Gambling-related suicide

Distribution by sex	39 men, 5 women
Ratio of men to women among suicides in:	
Sample	8 to 1
General Australian Population	4 to 1
General American Population	3 to 1
Mean age	40.8 years
Most common methods:	
CO poisoning	47.7%
Hanging	18.1%
Firearms	11.4%
Percent of suicides from lower socioeconomic strata	60.5%
Elevated blood level at time of death	15.9%
Had previously attempted suicide	31.8%
Explicit references to gambling in suicide notes	15.9%

Source: Blaszczynski and Farrell 1998.

tend to have declared bankruptcy at significantly elevated rates: 19.2 percent versus 5.5 percent for low-risk gamblers and 4.2 percent for non-gamblers. Research on those under treatment for problems with gambling has found that gambling-attributed current debt (as opposed to lifetime borrowing) is $39,000 in Wisconsin and $114,000 in Illinois (Thompson, Gazel, and Rickman 1996; cited in NORC 1999). Furthermore, NORC estimates that, on average, net lifetime losses from bankruptcy are about US$3,300 for pathological gamblers and US$1,600 for problem gamblers.

One of the questions raised by the Committee on the Social and Economic Impact of Pathological Gambling (1999) was whether additional debt incurred because of problem gambling represents a net cost to society or whether it is merely an economic transfer, that is, a temporary redistribution of money from one group in society (lenders) to another (borrowers), which in due time will be undone by repayment of the debt? Consider, for example, that there are many people who incur debt to mortgage homes or purchase vehicles and that such debt is not considered a net cost to society.

Furthermore, Cohn and Wolfe (1999) argue that, although personal bankruptcy rates in the United States increased by 41 percent between 1994 to 1996, claims by opponents to gambling that bankruptcy is a by-product of gaming activities are unfounded. A number of factors contradict the suggested causal link between the growth of casino gaming, for example, and the increase in bankruptcies. Namely, the majority of states with the highest bankruptcy rates are those *without* casino gaming: of the 10 states with the largest growth in bankruptcy filings, only Mississippi has casino gaming; of the 24 American counties with the highest bankruptcy filing rates, *none* have casino gaming; and South Carolina, a state with one of the lowest bankruptcy rates, has a video poker industry with more than 24,000 machines and a 1996 "handle" (see Glossary, page 127) of $1.03 billion. Furthermore, in a 1996 survey by *USA Today* of 522 bankruptcy filers throughout the United States, 63 percent cited credit-card bills and 50 percent cited the loss of employment or a pay cut as a main reason for bankruptcy; only *two* percent cited gaming as a major factor.

Personal bankruptcy filings have tripled in the United States since 1984 and have risen by about 40 percent in the last two years alone (National Centre for Policy Analysis 1999). The United States Treasury Department attributes the rise in personal bankruptcies to increased debt level relative to income, greater use of credit cards, a lower social stigma attached to filing for bankruptcy, and increases in the number of divorces. A rise in the number of bankruptcy filings and increased gambling rates prompted the US Congress to investigate the link between gambling and bankruptcy. The Treasury Department, charged with reporting on the issue, found a statistically *insignificant* relationship between gambling and bankruptcy. Overall, the

study found that frequent high-risk gambling raises the probability of bankruptcy by six percentage points from that of the base group, occasional gamblers; high-risk gambling appears to be associated with a greater likelihood of declaring bankruptcy but the low prevalence of this type of gambling suggests that it has a relatively minor impact on overall bankruptcy rates; and between 1993 and 1997 gross wagering jumped 53 percent while personal bankruptcies grew at an average annual rate of only 11 percent from 1985 through 1998 (*Wall Street Journal* 1999).

The NGISC (1999a) heard testimony about how compulsive gambling induces a heightened level of stress and tension in marriages and families, resulting in familial disharmony. Bland, Newman, Orn, and Stebelsky (1993) estimated that 23 percent of the spouses and 17 percent of the children of pathological gamblers were physically and verbally abused. These statistics vary somewhat across studies. Lorenz and Shuttlesworth estimated that 50 percent of spouses and 10 percent of children experienced physical abuse from a pathological gambler (Lorenz and Shuttlesworth 1999). It is important to note, however, that these statistics may be exaggerated as they are taken exclusively from samples of those people who have sought treatment for severe gambling disorders.

Finally, NORC estimates that the average pathological gambler accumulates US$4,300 more than expected in legal fees because of a disproportionately high divorce rate. This amount is determined by comparing the measured divorce rate of 53.5 percent versus an expected divorce rate of 33.4 percent for problem gamblers. Low-risk gamblers and non-gamblers have lifetime divorce rates of 30 percent and 18 percent, respectively. Problem gamblers have losses over a lifetime of US$1,950 more than expected in divorce legal fees and a divorce rate of 39.5 percent versus an expected rate of 31 percent for otherwise similar persons without gambling problems (NORC 1999: 49).

Australia

Australia tends to be at the forefront of gambling developments and gambling research. For example, a study by Dickerson *et al*. (1998) estimated the social costs of gambling (pathological gambling, in particular). The cost of gambling-induced employment changes, unemployment, and lost productivity is estimated at AUS$27.8 million annually. Legal costs are estimated at $5.6 million annually; prison costs are assessed at approximately $9 million; and annual police costs are estimated to be $2.6 million. The total cost attributed to pathological and problem gambling is estimated at $48.1 million per year, or $9.70 per capita among the adult population of New South Wales. However, this estimate of the social costs of gambling may be compared with the estimated AUS$2.9 billion in social *benefits* produced by gambling (Committee on the Social and Economic Impact of Pathological Gambling 1999).

Individuals are inherently social, existing within complex relationships. This companionable nature means that problem gamblers may borrow heavily or even steal from friends and family; while pathological gamblers will actually jeopardize the harmony of relationships with those close to them. In a clinical population of Australian problem gamblers, a study by AGIR (1996b) found that 50 percent experienced significant marital dysfunction, 36 percent owed money to their family members, 37 percent owed money to major finance companies, and 28 percent owed gambling-related money on their credit cards (not mutually exclusive events). Table 33 shows the proportion of families in which members are having trouble with their gambling in each Australian state.

Another area of interest to researchers is the effect of gambling on productivity. AGIR (1996b) reviewed clinical cases of problem gambling, and found that 68 percent of problem gamblers reported that gambling interfered with their productivity at work while 28 percent reported resigning or terminating employment due to gambling. It is estimated that an average loss of one hour of work per week by a problem gambler results in a productivity loss of AUS\$20 million per annum. Finally, Brown and Coventry (1997) conducted a study that found that problem gamblers were unable to pay for health services or adequate food. The financial instability due to gambling is cited as *the* most important reason why these problem gamblers are unable to afford necessities such as health care, food, and clothing.

In a similar research vein, Australia's Productivity Commission (1999) examined the effects of gambling on a variety of social and economic factors. The report

Table 33: Interstate comparisons of families with members experiencing difficulties with excessive gambling

	NSW 1995 (*n*=30)	NSW 1997 (*n*=1209)	TAS 1994 (*n*=1220)	TAS 1996 (*n*=1211)	WA (*n*=1253)
A member of family experiencing difficulties with excessive gambling	14.5%	11.7%	6.1%	8.0%	6.9%
Difficulties during the last six months	3.8%	3.3%	1.1%	2.3%	2.2%

Note: NSW = New South Wales; TAS = Tasmania; WA = Western Australia. Gaming machines not available in venues other than the casino for TAS 1994 = 1995 and WA 1994.

Source: Dickerson, Allcock, Blaszczynski, Maddern, Nicholls, and Williams 1998: 41.

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determined the effects of gambling on street crime, money laundering, and organized crime. The overall conclusions are summarized below.

♦ While some petty crime (and spotting for loan sharks) certainly does occur inside casinos and other gaming venues, the Commission did not identify any evidence to conclude that the crime rate inside casinos is any higher than that for other venues that draw similar numbers of people. Nor, did the Commission find evidence that what petty crime occurs represents a cost to society that is not already adequately dealt with through existing deterrents and sanctions.

♦ The Commission found no evidence that casinos in Australia bring about more per-capita street crime nor even that crime rates increase in the immediate vicinity of casinos.

♦ Money laundering in the gambling industry in Australia is unlikely to be a major cost to society—at least not a cost attributable directly to the existence of the industry itself.

♦ In the absence of substantive evidence to the contrary, the Commission's assessment was that, at the very least, legal gambling operations do not add markedly to problems of control and influence by organized crime.

The claim that gambling induces crime is based on two premises. The first premise is that gambling facilities increase the number of thefts and assaults in the community, and the second premise is that gambling attracts organized crime. The association between gambling and crime often has been used to justify the need for prohibition or strict regulation of the gambling industry. The association between gambling and crime is more commonly assumed to exist in relation to more traditional forms of gambling, such as horse racing. Furthermore, the trend toward legalizing a greater variety of gambling activities and opening up the supply of gambling services to greater competition has probably served to nullify the link between crime and gambling.

Given the complex structure of the regulatory controls governing the gambling industry, tens of millions of dollars are spent each year to employ the hundreds of government bureaucrats responsible for ensuring compliance with state regulation. Each Australian state regulates the gambling industry through its particular gaming authority and each state determines the license fees and rates of taxation. Casino licenses, for example, provide the respective licensee with regional exclusivity for a specific period. All suppliers of inputs to their business above a certain dollar limit must be government-approved and all employees are required to obtain police clearance and be registered casino employees (ACIL Consulting 1999). Meanwhile, lotteries are operated by both state governments and by private firms, which are required to obtain an operating license.

In the state of Queensland, the detection and prosecution of gaming and betting offences is the responsibility of regional policing units. Although there are no specialist gaming or racing units, the State Crime Operations Command (SCOC) periodically investigates gambling offences related to book-keeping as well as similar offences. According to the Queensland Government (1998), since the introduction of licensed casinos and other forms of legal gambling, the incidences of unlawful gaming and of racing and betting offences have fallen drastically (table 34).

The Victorian Casino and Gaming Authority investigated the effects of gambling-related crime. Overall, the 1997 research project found that there was no convincing evidence of an increase in crime in the state of Victoria since EGMs were introduced in 1992. The report concluded:

> In general, the introduction of EGMs appears to have caused little increase in crime and there are no statistics available on gambling related crime. Police have reported that crime at gaming venues was not a problem and that at some venues crime levels have fallen. This is in contrast to other findings where it was stated that problem gamblers who attended designated problem gambling programs reported that they had committed illegal acts to finance their gambling (ACIL Consulting 1999: 113).

Numerous investigations have delved into the extent to which problem and pathological gamblers resort to criminal activities to satisfy their gambling addiction. As part of their Queensland study, the AGIR (1996a) examined data from so-called "BreakEven" counselling centers for gamblers and found that 68.8 percent of male clients and 57.1 percent of female clients had legal problems attributable to their gambling behaviour. Surveys from the Arthur Gorrie Centre found that 31.1 percent had gambling-related personal or financial difficulties, 23 percent had spent more

Table 34: Unlawful gaming offences and racing and betting offences

	Unlawful Gaming Offences	Racing and Betting Offences
1993/1994	10	12
1994/1995	12	4
1995/1996	26	1
1996/1997	9	3

Source: Queensland Government 1998: 36.

money than they could afford on gaming machines, 5.4 percent had stolen money to play machines, 5.4 percent had been in trouble with the police due to machine-playing, and 6.8 percent declared that playing poker machines had resulted in their incarceration (Australian Medical Association 1998). The AGIR (1996b) study in New South Wales showed that among the clinical population, 60 percent had gambling-related offences, 25 percent of these individuals were charged, and half of those received custodial sentences of one to two years. Overall, AGIR estimated annual prison, court, and policing costs related to gambling at approximately AUS$17 million for New South Wales (Australian Medical Association 1998).

In addition to the social costs of gambling, there are costs associated with the treatment of problem gamblers and pathological gamblers. In New South Wales, the cost during 1996/1997 of public and other services for the treatment of problem gamblers and their families was estimated at AUS$3.2 million (ACIL Consulting 1999). Records from the Victoria state government show that, until January 1997, AUS$33 million was spent through that state's Community Support Fund for problem gamblers (ACIL Consulting 1999). Furthermore, Queensland Government (1998) reported that funds in excess of AUS$1 million were allocated to the operation of six "BreakEven" services. In Tasmania, a counselling service began operation in 1997 following the introduction of gaming machines in hotels and clubs. An estimated AUS$500,000 was made available for the treatment of problem gamblers (Tasmanian Gaming Commission 1998a).

Economic benefits and costs of gambling

> *Industry representatives have often identified employment and economic activity as the principal benefit to the economy. Most analysis of the [gambling] industry is typically based on input-output relationships at the national or regional level. Implicit to most of these studies is the assumption that the expenditure on gambling represents new expenditure, and thus the analysis invariably indicates large net gains in terms of activity and employment for the economy. In practice, however, the economy operates in a more complex and interconnected way. Money spent on gambling will be diverted from consumption elsewhere but this is not to say that there is no gain for the economy available from the growth of the gambling industry.*
>
> The Productivity Commission
> *Australia's Gambling Industries: Draft Report*

In determining the overall economic impact of the gambling industry, differentiating between which effects are net economic gains and which are merely economic transfers is a complex task. Money spent on gambling at, say, a casino that derives from tourists who live in other cities, regions, or countries represents a net benefit both to the casino and to the community in which the gambling occurs since it is new money entering the local economy. Money spent on gambling by local residents, however, is not necessarily a net economic benefit but merely an economic transfer within the community. In other words, without the presence of a casino, the money spent on gambling would have been spent on other entertainment or recreational activities available within the community.

When gambling expenditures replace or redirect spending from other industries it is considered a "substitution effect." Any new business that is brought into a community will contribute to the local economy but some of the new business represents displacement from other economic activities (Persky 1995), that is, a consumer who might have spent $100 on a restaurant dinner may instead spend that $100 gambling (Room, Turner, and Ialomiteanu 1999). Therefore, gambling revenue may not be con-

sidered entirely "new" money as some proportion of gambling revenues received by government may represent lost sales taxes from consumption of other goods and services or loss of investment capital in other industries (Beare and Hampton 1984).

Despite possible transfers from new industries, economic growth occurs within a community or region by expenditures from *new* business. The introduction of casinos and other gambling facilities often encourages large investments into communities for new capital projects, and additional spending for continual improvements and refurbishment on the initial investment. For example, according to Arthur Anderson Inc. (1996), in 1995, estimated total annual expenditure on construction, purchases of property, furniture and equipment, including improvements and refurbishments, for the American casino gaming industry was US$4.3 billion. Overall, therefore, in assessing the net economic impact of new entrants to the marketplace, it is necessary to determine if spending on new business(es) is actually new to the community or if it is merely income redirected from existing local business(es).

So-called input-output models may be used to assess the economic impact of an industry within a specific region by providing a basis for measuring the effects of changes in spending or employment from one industry on other industries. These models recognize, for example, that the outputs of one industry are the inputs of other industries and that employee wages from a given industry are spent on goods in other industries. Other measures of the economic benefits from the introduction of gambling facilities to a specific region are increased employment opportunities, licensing fees, and purchases of the capital and raw materials to build and maintain the premises.

Although the aforementioned determinants of economic impacts are the best measures for determining the net economic benefit of gambling, such data are, unfortunately, not generally available. However, an examination of the government revenues derived from licensure and taxation, the allocation of gambling revenues to socially beneficial causes, and the increases in employment and tourism as a result of gambling provide an alternative estimate of the benefit received by the community or region in which gambling occurs.

When measuring the economic costs of gambling, opponents of gambling argue that casinos and other such facilities stimulate corruption and criminal activities. Quantifying the cost of crime involves estimating expenses for arrests, prosecution, and imprisonment. In addition, the costs of gambling include expenses involved in the regulation of the industry and the treatment of problem gamblers. Overall, the actual net economic benefit from gambling is determined by the extent to which new money generated from gambling activities exceeds the costs incurred to generate that new money.

According to the Nobel Laureate economist Paul Samuelson:

> (Gambling) involves simple transfers of money or goods between individuals, creating no new money or goods. Although it creates no output, gambling does nevertheless absorb time and resources. When pursued beyond the limits of recreation, where the main purpose after all is to kill time, gambling subtracts from national income.

Other economists have taken exception to Samuelson's characterization of gambling. They point out that his criticisms could be applied to attendance at the cinema or visits to Disneyland. The latter are products that do not add to the ability of the economy to produce more but still have value because they provide utility (i.e., satisfaction) to consumers (Dunstan 1997).

Canada

Economic benefits

The most recent and comprehensive analysis of the economic costs and benefits of legalized gambling in Canada found that the *net* economic benefit was equivalent to $3.044 billion in 1995, up from $526 million in 1990 (Vaillancourt and Roy 2000).

Government revenue derived from state-run lotteries, casinos, and VLTs increased from less than $100 million in 1970 to $1.3 billion by 1985, and reached a total of $8.1 billion in 1999. According to MPM Gaming Research (1998), in 1985 gambling revenue made up just 1.7 percent of provincial government revenue; by 1995, this portion had increased to 3.8 percent. In Manitoba, gambling earns $220 million annually for the provincial treasury and represents the latter's third-largest source of revenue (income tax revenue in 1998 was $1.4 billion and retail sales tax revenue was $745 million). Manitoba's provincial government obtains 3.9 percent of its revenue from gaming, second only to Alberta among the provinces. Between 1992 and 1997 (table 35), total gambling revenues for provincial governments grew from $1.7 billion to $3.8 billion. Overall, the portion of revenue derived from gaming activities also increased during this period. The largest increase occurred in Alberta: in 1992 the portion of government revenue from gaming was 1.1 percent; in 1997, it was 4.2 percent.

As discussed in an earlier section, much of the controversy surrounding VLTs stems from their availability in untraditional gambling venues, such as corner stores and gas stations. Researcher John Jozsa (1999) testified to the Nova Scotia Standing Committee on Community Services that "[t]he cost of VLT gambling is not cheaper or more effective in any way for the gambler than any other forms of gambling. This is

Table 35: Provincial gambling expenditure per capita and government revenue in Canada, 1992 and 1997

	Expenditure per capita ($CDN; ages 18+		Total (CDN$ millions)		Government share of total revenue (%)	
	1992	1997	1992	1997	1992	1997
Newfoundland	151	243	43	75	2.3	3.6
Prince Edward Island	236	340	8	13	1.8	2.4
Nova Scotia	200	296	69	102	2.6	3.4
New Brunswick	224	328	48	68	1.9	2.1
Quebec	134	348	473	1,054	1.6	3.0
Ontario	109	300	530	1,242	1.3	2.6
Manitoba	126	310	105	211	2.4	4.1
Saskatchewan	76	275	40	141	1.0	2.7
Alberta	99	328	125	643	1.1	4.2
British Columbia	157	153	239	262	1.6	1.2
Yukon & Northwest Territories	72	75	—	1	—	0.3

Sources: Marshall 1998; Statistics Canada, *National Accounts*.

one of the reasons government and the retailers can have such a relatively high take from the VLT" (Jozsa 1999: 5). Other reasons that governments receive a relatively high return from VLTs are their low operating cost and their low price elasticity, that is, the unresponsiveness of VLT players to price changes (see table 36).

Employment

The gambling industry has become a major employer in most provinces and territories. Between 1992 and 1999, employment in the gaming industry increased from 11,900 to 39,200, an increase of 330 percent. In comparison, 1.8 million jobs were created in non-gambling industries, representing only a 14 percent increase. There also tends to be an above-average representation of women and youths employed in the gambling industry. In 1999, 56 percent of those employed in the gambling industry were women (employment in other industries was 46 percent female) and 60 percent of employees were under 35 years of age (39 percent in other industries).

Table 36: Provincial government revenue from gambling in Canada, 1998

	All gambling (percent of total revenue)	VLTs and slots (percent of total revenue)	Net VLT revenue
Newfoundland	2.4	1.2	N/A
Prince Edward Island	2.1	1.0	$121,357,000
Nova Scotia	3.1	1.6	$518,236,100
New Brunswick	2.0	1.2	$143,336,000
Quebec	2.8	0.8	N/A
Ontario	2.8	0.0	$315,353,000
Manitoba	3.9	2.0	$ 57,696,000
Saskatchewan	2.9	1.5	$ 80,711,000
Alberta	4.0	2.7	$ 8,798,000
British Columbia	1.4	0.0	$ 44,330,000

Sources: Canada West Foundation 1998; Provincial Lottery Corporation (1997/1998), *Annual Report.*

Full-time employment in the gambling industry increased from 59 percent in 1992 to 82 percent in 1999, identical to the full-time rate in other industries (Marshall 2000). Wages and remuneration for employees of the gambling industry tend to be lower than in other Canadian industries. Men in full-time gambling-related jobs earned, on average, $16.19 per hour while women earned $14.66. Male and female workers in other industries earned $18.58 and $15.32 per hour, respectively (Marshall 2000). This is because a majority of gaming employees are younger and less educated than workers in other industries. Table 37 presents statistics for the gaming industry compiled by Statistics Canada.

Tax Revenue

According to the National Council on Welfare (1996), the provincial tax burden in Alberta was $214 less per person in 1995 because of gambling proceeds. That is, without the presence of gambling, the Alberta government would have had to raise taxes by $214 per person to maintain the same level of government service to Albertans. One of the main criticisms of gaming taxes is that they are a regressive form of taxation because, as a proportion of their incomes, low-income gamblers contribute more

Table 37: Employment characteristics in gambling and other industries in Canada (1999)

	Gambling	Other industries
Sex		
Men	44%	54%
Women	56%	46%
Age		
15–34	60%	39%
35 and over	40%	61%
Education		
High school or less	55%	48%
Post-secondary	45%	52%
Occupation		
Artistic, Literary, Recreational	38%	2%
Clerical	27%	15%
All other occupations	35%	83%
Work status		
Full-time	82%	82%
Part-time	18%	18%
Average hourly earnings		
Men (full-time)	$16.19	$18.58
Women (full-time)	$14.66	$15.32

Sources: Labor Force Survey; Survey of Consumer Finances.

to tax revenues than middle-income and high-income gamblers. A gaming tax is considered progressive if a larger proportion of revenue comes from gamblers in higher-income brackets. As detailed in an earlier section, although it is accurate to say that lower-income players spend a higher proportion of their disposable income on gaming, they do so willingly. Furthermore, gamblers with higher incomes actually spend considerably more money in nominal terms on gaming than do gamblers with lower incomes.

Within each province, local gaming authorities and related organizations provide employment for a variety of people. For example, in 1998 the Saskatchewan Indian Gaming Association employed approximately 850 people; 70 percent of those employed were aboriginal. The Saskatchewan Liquor and Gaming Authority (1998) employed 721 people in 1998, of which 317 were employed full-time and 404 were employed part-time.

Tourism

As explained earlier, new wealth from casino gaming stems from monies wagered by patrons from outside the respective casino's region, namely tourists. Thus, most economists would agree that spending on casino gaming by local residents provides the smallest benefit (if any) to the local economy. It is the new money injected into the economy by people visiting a region that provides a net benefit. Furthermore, Canadian casinos located near the border between Canada and the United States, such as the *Casino Windsor,* have a competitive advantage over their American counterparts because winnings are not taxed in Canada as they are in the United States.

As such, the economic benefits derived from "destination casinos" will differ from those derived from casinos that serve primarily local customers. Destination casinos are expected to attract increased commerce, revenue, and employment, offset minimally by minor inconveniences and environmental problems such as crowding, traffic congestion, and parking problems (Room, Turner, and Ialomiteanu 1999). A study by Ernst & Young (1994) found that in Windsor, Ontario, 41 percent of the American tourists would not have visited the area without the casino (Henriksson 1996). Although destination casinos appear to have positive short-term benefits, there are concerns that increased competition will detract from the overall profitability of these casinos. Detroit, Michigan, for example, has made plans to establish three casinos in order to deter residents from crossing the border to gamble in Windsor.

Casinos that mainly serve tourists create economic growth for their respective communities. *Casino Windsor* opened in July 1998, employing over 5,000 people. The combined casino complex and hotel was expected to create over 15,000 direct and indirect jobs (Ontario Casino Corporation 1998). In 1998, *Casino Windsor* generated gross revenues of $515.1 million and had an average of 13,000 visitors a day. In Quebec, the operation of casinos contributes to sustaining approximately 7,440 jobs, along with annual economic production of $257 million. In addition to dividends of approximately $224 million from casino profits, the Quebec government also collects tax revenues of about $41 million annually as a result of casino-related activities (Loto-Quebec 1998a). Ontario's *Casino Niagara*, located in Niagara Falls, Ontario, is estimated to generate $1.3 billion dollars of new economic activity annually through casino-related activities and increased tourism.

Although the Manitoba Lotteries Corporation, which is responsible for all gambling in that province, is unable to identify the specific percentage of total gambling revenue that stems from tourism, in 1998 it estimated that Winnipeg was visited by approximately 600 tour-bus groups carrying, in total, about 27,000 gamblers. Estimated local spending from tourism, combined with its associated economic benefits such as job creation and spending on goods and services totaled $17 million (Waytiuk 1999).

Cultural and non-profit organizations

Every year, the Manitoba Lottery Corporation provides community support through a wide range of community events and programs. For example, it expects to increase annual funding to over $1.5 million for the Addictions Foundation of Manitoba. In Alberta, the Alberta Lottery Corporation also provides community support through the Alberta Lottery Fund, which funds over 4,000 community initiatives each year. In 1997/1998, the donations totalled over $596 million (Alberta Gaming and Liquor Authority 1998).

Many gambling operations provide funding to cultural and non-profit organizations. Since 1995, Loto-Quebec has invested over $1.7 million in the visual arts. Non-profit organizations throughout Quebec also benefit from the gaming industry. After three months of operation, the amount received by non-profit organizations from network bingo was over $2.1 million. Furthermore, Loto-Quebec has already donated $2 million to scientific research and development and has decided to fund the Centre Québeçois d'excellence pour la prevention et le traitement du jeu. In Ontario, the provincial government-run casinos contribute $100 million annually to socially beneficial causes (Youngman Berdahl 1999).

In British Columbia, on October 31, 1997 the provincial government enacted the *Gaming Proceeds Distribution Regulation*, which updated its gaming revenue policies to provide a new revenue distribution model for charities, government, and gaming operators. Charities are now designated to receive one-third of the net revenue from charity casinos and bingo operations after payments of operator commissions and prizes. The government receives the remaining two thirds of net revenue.

A report prepared by Youngman Berdahl (1999) for the Canada West Foundation stressed the importance of gaming grants to non-profit organizations in Alberta, Saskatchewan, and Ontario. Overall, of the 400 survey respondents, 28 percent of non-profit organizations rated gaming grants as their top funding source and 50 percent of the sample rated gaming grants in their top three funding sources. Eighty-four percent of the sample either agreed or strongly agreed with the statement: "Without lottery or gaming grants and charitable gaming, many non-profits would not have the funds necessary to run their programs."

Economic costs

Crime

A common misconception is that there is an association between gambling facilities and the incidence of crime. Although gaming-related offences peaked in the early-to-mid-1970s, they have since fallen sharply. Jackson and Griffiths (1991) attribute the mild fluctuations around the downward trend to shifting social attitudes toward gambling and declining attention by law enforcement. In Canada, both the actual number of felonies committed in this area and the rate of such crime have historically been very low but, in the early 1990s, the rate sank further to record low levels. On average, in the period between 1991 and 1995, only two of every 100,000 Canadians committed offences related to gaming. The sharp decline is related, at least in part, to the wider availability of legal gambling venues throughout the country. Table 38 presents the number of Canadian gambling-related offences in 1997.

Room, Turner, and Ialomiteanu (1999) compared public perceptions of the effect of the opening of *Casino Niagara* in 1996 and the actual events. Overall, prior to the opening of the casino, 77 percent of respondents expected the number of serious crimes to increase but following the establishment of the casino, only 44 perceived this as having happened. Furthermore, the perceptions that young people would get into trouble with the law, family break-ups would increase, and people would move away were all exaggerated. With the exception of increases in traffic congestion, and minimal environmental impacts (e.g., increased littering, higher noise levels, and more numerous drunken disturbances) the presumed negative impacts associated with the introduction of the casino were, in reality, minimal.

The Alberta Gaming and Liquor Commission (1998) reported 149 gambling-related incidents in 1996/1997. Most incidents involved violations of VLT retailer agreements, that is, cheating at play at casinos and illegal gaming activities. Also, there were 154 new gaming investigation files opened by the Commission's Special Operations Division, with the result that 40 charges were laid under the *Gaming and Liquor Act*. In comparison, the Commission reported 647 liquor-related incidents in 1997/1998 and 433 incidents in 1996/1997.

The government of Nova Scotia conducted extensive research to examine the viability of banning VLT gaming. The Standing Committee on Community Services (1999a) heard testimony from the Royal Canadian Mounted Police (RCMP), which claimed that the legalization of VLTs in Nova Scotia was partly motivated by a concern with illegal VLTs. The RCMP believes that the legalization of VLTs and enforcement of the applicable laws has almost completely wiped out the province's once abundant illegal machines. Further testimony reported that the removal of VLT

Table 38: Incidents reported to police in Canada, by most serious offence (1997)

| Offence | Actual Number[1] | Rate[2] | Offences Cleared | | | Adults Charged[4] | | Youths Charged[4] | |
			By charge	Otherwise	Clearance Rate[3]	Male	Female	Male	Female
Betting House	45	—	44	—	97.8	131	11	—	—
Gaming House	83	—	66	11	92.8	188	30	1	1
Other	293	1	123	57	61.4	117	62	3	—
Total	421	1	233	68	71.5	436	103	4	1

Notes: [1] To produce the "actual number" of incidents, unfounded incidents are subtracted from the number of reported incidents. [2] Rates are calculated per 100,000 population. The population estimates for 1997 are updated post-censual estimates as of July 1, and are provided by Statistics Canada Demography Division, Population Estimates Section (Canadian population = 30,285,800). Due to rounding, figures may not add exactly to totals. [3] "Clearance rate" is the number of incidents cleared by charge and cleared otherwise in the reporting period, divided by the actual number of incidents in the reporting period. Since a criminal incident may be solved several months or years after it was first reported in the UCR survey, it is possible for the number of incidents cleared to be greater than the total number of actual incidents. [4] The category, persons charged, includes the number of people charged or recommended for charges by police according to the most serious offence.

Source: Statistics Canada, Catalogue no. 85-205-XPE.

machines would have limited effects on the economy because expenditures on gambling would likely be directed to other gambling activities. One of the concerns reported to the Standing Committee was that, if there was a significant increase in illegal gambling activities, government revenues would be affected, as the government cannot collect taxes on illegal gaming. Therefore, if the province banned VLTs, it would incur an estimated loss of $57.1 million of the current $80.4 million it receives from VLT revenue. Furthermore, if VLTs were banned in Nova Scotia, with the exception of First Nations Reserves, it is estimated that the household income of Nova Scotians would decline by about $3.7 million, 145 full-time equivalent jobs would be terminated, and government revenue would decline by approximately $57 million (Standing Committee on Community Services 1999).

A connection between gambling and crime is also seen in the expense incurred for the additional resources required to regulate and monitor gambling offences. Although this data is not available, it is noteworthy that many casinos provide the financial resources necessary to cover the costs of additional police officers required to monitor gambling communities. For example, the Windsor and Niagara casinos fund 25 police officers to patrol their respective neighborhoods and *Casino Rama* provides funding for 11 police officers to patrol the Chippewas of Rama (Mnjikaning) First Nations lands (Ontario Casino Corporation 1998).

Addiction

Costs are also incurred in the treatment of problem gamblers. For example, the Addictions Foundation of Manitoba receives between 1,700 and 1,800 telephone calls every year from people who are experiencing gambling-related problems (Waytiuk 1999). In New Brunswick, a gambling hotline referral service receives approximately 450 calls annually from problem gamblers seeking assistance. In addition, treatment professionals trained to diagnose and treat problem gamblers are located in each of the province's seven addiction units, although there are no staff positions dedicated to gambling services (Volberg 1996).

United States

Economic benefits

In the United States, as elsewhere, there are direct and indirect taxes imposed on gambling activities. Indirect tax revenues consist of two types. The first type of indirect tax paid on gambling activities is the tax paid by individuals who acquire new income as a result of casino operations. The second type of indirect tax revenue is the tax paid by casino patrons on hotel rooms, meals, and other local expenditures. Federal taxes represent less than 18 percent of the total tax burden for gamblers with the remainder being paid at the state and the local level.

In 1997, the largest American casino markets were:

♦ Nevada: 429 full-scale casinos, 1,978 slots-only locations, one Indian casino, and gross casino revenues of US$7.9 billion;

♦ New Jersey: 14 casinos and gross casino revenues of US$3.9 billion; and

♦ Mississippi: 29 state-regulated casinos, one Indian casino, and gross casino revenues of US$2 billion (NGISC 1999b).

In 1995, the casino gaming industry reported between US$22 billion and US$25 billion in total revenues, US$16.3 billion of which was derived specifically from casino gaming. The federal, state, and local governments received $2.9 billion in taxes from gambling activities. Direct employment in the casino-gaming industry was estimated at 284,000 with wages of approximately $7.3 billion. These estimates exclude activities from casinos operated by Native Americans, casinos on cruise ships and certain non-casino slot machines, which had estimated casino revenues of more than US$6 billion (Arthur Anderson 1996).

As noted earlier, a recent American study demonstrates that gambling improves the overall socioeconomic health of the community in which the gambling occurs. The NORC (1999) study used a sophisticated statistical model to determine the socioeconomic impacts of a casino's proximity on various social and economic indicators such as employment and crime. The study concluded that the "casino effect" does not significantly increase either crime or bankruptcy. Proximity to a casino does, however, significantly increase per-capita casino spending, income, and employment. Additionally, the study showed that the proximity of a casino brought a decrease in the percentage of the labour force unemployed, the number of tax dollars spent on welfare payments, and government transfer payments. Furthermore, local economies with legalized gambling experienced growth in the construction trades, the hotel and hospitality industries, and the recreation and amusement sector (NORC 1999).

Employment in the American gambling industry is comparable to other industries in terms of wages and benefits. Annual salaries averaged US$26,000 in the largest casinos, US$20,500 in smaller commercial casinos, and $18,000 in tribal casinos. (NGISC 1999b). Arthur Anderson (1996), found that, in 1995, the average national wage, including tips and benefits, paid to casino gaming employees was approximately US$26,000. This compares to US$20,000 in the amusement and recreation industry, US$16,000 in the hotel and motel industry, and US$22,000 in the motion picture industry. The overall national average wage (including tips and benefits) for all industries was approximately US$26,000. In 1996, more than half a million people were employed by the legal gambling industry and earned more than US$15 billion in wages. Table 39 shows the number of employees by state, including the total wages for 1995.

Table 39: Employees and wages in the casino gaming industry in some American states, 1995

	Employees	**Wages (US$000s)**
Colorado	6,500	131,000
Illinois	12,000	306,000
Indiana	1,000	25,000
Iowa	3,800	97,000
Louisiana	13,600	312,000
Mississippi	27,100	564,000
Missouri	8,200	215,000
Nevada	170,000	4,280,000
New Jersey	40,800	1,374,000
South Dakota	1,100	27,000
Total	284,100	7,331,000

Sources: State Commissions; Casino Association of New Jersey; *Harrah's Survey of Casino Entertainment*, 1996, Arthur Anderson LLP.

Riverboat casinos were introduced to Iowa in 1991 and quickly spread throughout the United States. By 1998, there were over 40 riverboat casinos operating in Illinois, Indiana, Missouri, and Iowa, and nearly 50 riverboat and dock-side casinos in Louisiana and Mississippi. In 1997, revenues from riverboats totaled US$6.1 billion. The same year, riverboats paid over $1 billion in gambling privilege taxes (NGISC 1999b). Since being introduced to the American gambling market, riverboat casinos have contributed hundreds of millions of dollars in investment capital to Mississippi alone. Although the short-term effects of legalized gaming appear to be promising, according to the UNLV International Gaming Institute (1996), the ultimate impact of the newly legalized gaming jurisdictions will depend on the future conditions of the competitive marketplace, including the ability to attract tourism, comparative tax structures, and the types of gambling permitted in the respective jurisdictions.

In 1999, the estimated employment in the United States in the pari-mutuel gaming industry was 119,000. Of this number, track and off-track betting operations constituted 36,300 jobs, the maintenance of competing horses, 52,000, and horse breeding, 30,800. James Hickey of the American Horse Council suggests that, overall, the annual impact of the pari-mutuel industry on the American economy is US$34 billion, supporting 473,000 jobs (NGISC 1999b).

In 1997, Coopers & Lybrand L.L.P. conducted a nationwide survey of gaming industry employees on behalf of the American Gaming Association (AGA). As of July 1997, total employment in the industry was approximately 330,000. The survey was administered to 178,000 employees, approximately 54 percent of the total number of workers in the industry. Employment in the gaming industry had grown by approximately 46,000 jobs (16 percent) since December 1995. By comparison, total non-agricultural job growth in the United States was approximately 2.2 percent in 1995, and 3.5 percent in the service sector (Coopers & Lybrand 1997). Gaming-industry employees also donated more than US$58 million to charitable organizations in the past year and contributed 884,000 hours of volunteer time (Coopers & Lybrand 1997).

Ryan and Speyrer (1999) present the results of a survey issued to 13,000 Louisiana businesses in 1998. In Lake Charles, 72.3 percent of respondents indicated that gambling had positively affected their community; in Shreveport-Bossier City, the proportion was 71.5 percent; in New Orleans, Baton Rouge, and the rest of Louisiana the positive responses were 44.7 percent, 47.8 percent, and 51.3 percent, respectively. This study concluded that the overall measurable cost/benefit ratio for the forms of gambling studied in the report for the state of Louisiana was positive. This conclusion was based on the assumption that the costs of gambling include the regulatory costs to the state government and the measurable external or social costs created by the gambling industry. The net benefit created by gambling in Louisiana totaled US$1.1 billion while the net cost totaled US$531.5 million; hence, the benefit/cost ratio is slightly higher than two. Overall, therefore, based on the measurable economic costs and benefits (table 40), it appears that the benefits of the Louisiana gambling industry significantly outweigh its attendant costs (Ryan and Speyrer 1999).

Table 40: 1998 Louisiana gambling cost/benefit analysis (US$ millions)

Benefits	
New Earnings	$660.36
New Direct Taxes	$447.12
Total Benefits	$1107.48
Costs	
Regulatory Costs	$50.02
Measurable Social Costs	$481.45
Total Costs	$531.47
Benefit/Cost Ratio	2.08

Source: Ryan and Speyrer 1999: iv.

Economic costs

Opponents of gambling often counter claims of local economic benefits with arguments of economic "cannibalization." This term refers to situations wherein the increased economic activity produced by the introduction of a casino, for example, directs expenditure away from local non-gambling businesses and from other forms of gambling (NGISC 1999b). Arthur Anderson (1996) argues that cannibalization (or substitution) argument assumes that the size of the economy is fixed and, therefore, that the introduction of gambling cannot increase total economic activity. In other words, it assumes that casino gaming is simply a reallocation from other consumer spending. This claim is not always supported by the evidence.

McGowan (1994) examined the degree of cannibalization of existing lottery games due to new state-sponsored forms of gambling. The study analyzed a year's data from weekly lottery sales in six states. Sales for the 26 weeks prior to the introduction of a new form of gambling were compared with sales during the 26 weeks following. Overall, the analysis found that, while some forms of gambling did not significantly interfere with the existing lotteries, others were found to cannibalize existing lottery sales. For example, Rhode Island started its lottery in the early 1970s. In 1992, the Rhode Island Lottery Commission began to sponsor video poker machines in various locations. The study showed that the sale of Rhode Island's numbers games increased following the introduction of video poker games. Maryland, on the other hand, experienced the opposite effect in 1993 when it introduced Keno to supplement its lottery revenues. Because Keno is a numbers game that is played more frequently than regular lotteries, the introduction of Keno acted as a substitute for, rather than as a supplement to, the Maryland lottery, thus decreasing lottery revenues.

One of the expectations attached to riverboat casinos is that they increase local tourism. However, critics of this form of gambling doubt the extent to which riverboat casinos actually promote expansion of general tourism. According to the NGISC (1999b), "day-trippers" or "excursionists" tend to concentrate almost entirely on gambling and often spend little or no time and money at non-gambling locations. Furthermore, critics assert that riverboat casinos that primarily serve the local population have a perversely negative economic impact on the community because gambling profits are gained by owners outside the community and the benefits of taxes raised locally are disbursed throughout the state.

The cost/benefit analysis prepared by Ryan and Speyrer (1999) reported that there appears to be some degree of substitution among forms of gambling in Louisiana. In 1992, before the implementation of riverboat casinos and video-poker machines, the lottery, horse racing, and charitable gambling had net revenues of US$450.6 million.

In 1996, after riverboat casinos and video-poker machines were fully implemented, the lottery, horse racing, and charitable gaming had net revenues of only $269.3 million, a 40 percent decline in revenues.

Crime

There are two prevailing arguments regarding the relationship between gambling and crime. According to the NGISC (1999b), opponents to gambling argue that the introduction of legalized gambling increases crime in a community while proponents claim that legalized gambling reduces crime because it eliminates incentives for illegal gambling. The Federal Bureau of Investigation (FBI) publishes an annual report, *Crime in the United States*, which includes statistical information about levels of crime in America. According to this 1997 publication, there are a number of factors that affect the volume and type of crime occurring from place to place. These include:

- population density
- variations in the age distribution of the population, particularly the percentage of youths
- stability of population: residents' mobility, commuting patterns, and degree of transiency
- modes of transportation and highway system
- economic conditions, including median income, poverty level, and job availability
- cultural factors and educational, recreational, and religious characteristics
- family conditions, including divorce and family cohesiveness
- climate
- effective strength of law enforcement agencies
- administrative and investigative emphases of law enforcement
- other components of the criminal justice system
- citizens' attitudes toward crime.

Table 41 presents an excerpt from the 1996 edition of *Crime in the United States*. The table shows the total number of arrests, broken down by the type of charge and by race. A comparison between the number of arrests for alcohol- and drug-related offences and gambling-related offences shows that the incidence of crime attributable to gambling is substantially lower than the rate related to drugs and alcohol.

Margolis, Altheimer, and Gray (1997) prepared a detailed analysis of the relationship between casinos and crime. The study focused on 10 American jurisdictions that have commercial casinos. According to these researchers, the *New York State Task Force on Casino Gambling Report* found that the crime trends in Atlantic City have been misinterpreted by many observers, who failed to account for an increase in the

Table 41: Persons arrested in the United States, by charge and race, 1996

Offence charged	Total arrests (1,000)					Percent distribution			
	Total	White	Black	American Indian / Alaskan Native	Asian / Pacific Islander	White	Black	American Indian / Alaskan Native	Asian / Pacific Islander
Drug Abuse Violations	1,160.7	701.9	445.8	5.7	7.3	60.5	38.4	0.5	0.6
Driving under the Influence	1,050.2	911.5	107.1	17.9	13.7	86.8	10.2	1.7	1.3
Liquor Laws	499.0	403.8	79.2	12.6	3.4	80.9	15.9	2.5	0.7
Drunkenness	525.4	426.3	84.6	12.5	2.0	81.1	16.1	2.4	0.4
Gambling	17.2	7.9	8.7	0.1	0.6	45.6	50.4	0.4	3.6

Source: US Federal Bureau of Investigation, Crime in the United States, annual report. Data shows arrests, not charges, reported by 10,027 agencies covering a total 1996 population of 196 million as estimated by the FBI.

number of out-of-town visitors frequenting its casinos. Although Atlantic City has a permanent resident population of 37,000, its average daily population swells to three times that number. Between 1977 and 1980, reported violent crime increased 130 percent and non-violent crime increased 176 percent. Although the number of crimes increased, the risk of individual victimization appeared to have fallen slightly according to visitor-adjusted per person crime rates. Most of the additional offences involved thefts that took place on the casino floor or in adjacent hotel complexes, rather than in the surrounding community. Overall, crime rates in Atlantic City have been in decline since 1982, despite a steady increase in gaming revenues.

Las Vegas, Nevada is considered the casino capital of the world. Every year, Las Vegas receives approximately 30 million tourists, conventioneers, and business people, who frequent its casinos. The Las Vegas Metropolitan Statistical Area (MSA) population increased from 462,000 in 1980 to 1.2 million in 1996. Despite a tremendous influx of tourists and a large population, however, according to the FBI, Las Vegas has a lower crime rate and is safer than virtually every major American tourist venue.

Margolis, Altheimer and Gray (1997) also examined the incidences of crime in relation to the riverboat casinos introduced to Iowa in 1991. Overall, it was observed that the city of Davenport's crime rate declined in the first three years following the introduction of the casino, then increased in 1995 in tandem with crime levels prevalent in the rest of the state. The reported total number of offences in the towns of Iowa in which riverboat casinos operate indicates that crime rates either remained constant or rose incrementally with the prevailing statewide sociodemographic trends.

Miller and Schwartz (1998) report that one of the most common fallacies in the study of casinos and street crime is the assumption made by many critics of legalized gambling that casinos are something separate and different from other entertainment attractions. The authors cite a study by Chesney-Lind and Lind (1986) that found that one of the reasons why there is more crime in tourists areas is that tourists themselves are targets for crime. The authors suggest that tourists who leave cameras on beach towels while swimming are more likely to be theft victims; tourists who are out carousing and drinking heavily late at night in dangerous neighborhoods are more likely to be robbed or raped; and tourists who leave expensive valuables in anonymous and loosely guarded hotel and motel rooms are more likely to be the victims of burglary (Miller and Schwartz 1998).

The NGISC (1999b) also reported that all of the evidence presented to the Commission indicated that state regulation, in addition to facilitating the takeover of much of the industry by reputable private corporations, has eliminated organized crime from the direct ownership and operation of the casinos. Evidence provided a scholar

studying criminal justice at Virginia Commonwealth University found that the arrest trends for embezzlement, forgery, and fraud in nine of the largest casino markets show no consistent pattern, although more jurisdictions report decreases than increases in arrests (NGISC 1999b).

Opponents of gambling claim that those who experience problems with their gambling resort to criminal activities to finance their addiction. According to the National Research Council: "As access to money becomes more limited, gamblers often resort to crime in order to pay off debts, appease bookies, maintain appearances, and garner more money to gamble" (NGISC 1999a: 7–13). Tables 42 and 43 show the weighted occurrences of crimes by type of gambler and an estimate of the costs incurred for these offences. NORC (1999) estimates that the arrests of problem and pathological gamblers (on an annualized, present-value basis) cost government US$960 and US$1,250, respectively. The estimated "lifetime" costs are approximately US$10,500 for pathological and US$5,100 for problem gamblers.

The NORC study estimates that these costs amount to approximately US$3,000 annually per pathological gambler (table 44). Other costs of gambling include unemployment benefits and monies that employers spend to recruit and train new workers, increased welfare use, and bankruptcy filings. According to NORC, problem and pathological gamblers account for approximately 15 percent of total gambling revenues in the United States or US$7.6 billion per year.

Several NGISC panelists were troubled by the report's finding that the cost of problem gambling is relatively small—about US$5 billion a year in legal fees for divorce, court and jail costs for arrests, lost wages, and bankruptcy—in comparison with costs of US$72 billion for smoking, US$166 billion for alcohol abuse, and US$71 billion for motor vehicle crashes (Arnold 1999).

Another measure of the net economic effect of gambling is its effect on property values. An increase in property values may indicate a positive effect from gambling; conversely, a decrease in property value suggests a negative effect that may be attributable to gambling. The NGISC (1999b) reports that, although the introduction of gambling increased the rate of growth of property values, the greatest effect was realized by commercial property values. Residential property values were not raised at all and. in fact, may have been slightly lowered by casino gambling.

The aforementioned NORC (1999a) study reported estimates of the annual costs for treatment of pathological gamblers. In the NORC survey, 33.8 percent of pathological gamblers reported they were in poor or fair health, while approximately 14 percent of low-risk gamblers reported they were in poor or fair health. NORC estimated

Table 42: Weighted occurrences of criminal-justice consequences by type of gambler

	Non-Gambler	Low Risk	At Risk	Problem Gambler	Pathological Gambler
Arrested	4.5	11.2	20.7	36.3	32.3
Number of times arrested	1.7	2.1	2.9	1.6	3.3
Incarcerated	0.4	3.7	7.8	10.4	21.4

Source: NORC 1999a: 48.

Table 43: Criminal justice losses by type of gambler

Type of cost	Who pays?	Time period of estimate	Problem gambler	Pathological gambler
Arrests	Government	Lifetime	$960	$1,250
Corrections	Government	Lifetime	$670	$1,700

Source: NORC 1999a: 48.

Table 44: Financial costs by type of gambler

Type of cost	Who pays?	Time period of estimate	Problem gambler	Pathological gambler
Unemployment benefits	Government	Past year	$65	$85
Welfare benefits	Government	Past year	$90	$60
Filed bankruptcy	Creditors	Lifetime	$1,600	$3,300

Source: NORC 1999a: 46

annual health-care expenditures increased by approximately US$750 per person for pathological gamblers. Furthermore, approximately 13 percent of pathological and problem gamblers reported use of medical services during the past year compared to just under seven percent of low-risk gamblers and non-gamblers. The estimated average cost of mental-health services per gambler (problem and pathological) is $350 per year.

The National Council on Problem Gambling (NCPG) is the national coordinating body for 34 state affiliates and other treatment organizations and self-help groups. According to NCPG's "National Survey of Problem Gambling Programs," in 1998 the combined resource allocation by states was approximately US$20 million annually to 45 different organizations. The AGA-funded National Center for Responsible Gaming (NCRG) also supports the treatment of problem and pathological gamblers. In 1997, for example, NCRG awarded 10 grants totalling US$1.3 million for investigations into the effects of disordered gambling behaviour.

Australia

Economic benefits

Australian lotteries are heavily taxed and a major source of revenue for state governments. A majority of the government revenue raised by lottery taxes is earmarked for various socially beneficial causes. For example, in Queensland the 1997/1998 taxes and levies on gambling totaled over AUS$528 million. Of this amount, contributions were made to the following funds: Casino Community Benefit Funds ($4.7 million), Gaming Machine Community Benefit Fund ($17.3 million), Charities & Rehabilitation Benefit Fund ($26.4 million), and the Sporting & Recreation Fund ($43.7 million). The total amount contributed was $92.1 million (ACIL Consulting 1999).

Overall, NSW Lotteries (1998) estimates that the direct contribution from lotteries to the Australian economy is over AUS $1 billion or approximately 0.3 percent of GDP. In New South Wales, the direct employment in lottery operations is estimated at approximately 2,000 and an estimated 5,000 jobs were created as a result of the indirect benefits of the activities of NSW Lotteries. Since it was established over 67 years ago, NSW Lotteries has paid out more than $7 billion to thousands of winners and contributed nearly $3.5 billion (representing approximately a third of every dollar received) to the Consolidated Fund for the benefit of the New South Wales population. In 1997, more than $300 million was raised through lottery revenue, which paid for many essential services that otherwise would be funded through another revenue source or not at all (NSW Lotteries 1998).

"Consumer surplus," as previously discussed, measures the difference between the amount a consumer is prepared to pay for a good or service rather than go without it and the amount actually paid. "Producer surplus" is defined as: "The net economic benefit to the providers of gambling services, which together with the revenue from gambling taxes is approximately measured by the industry's 'value-added' or contribution to national GDP" (ACIL Consulting 1999: xv). It is estimated that the Australian gambling industry generates an annual producer surplus of approximately AUS$5 billion and contributes approximately $5.5 billion annually to the nation's GDP.

Licensing is another method by which governments are able to collect revenue from gambling activities. Government control over the issuance of gambling licenses allows the government to control the number of competitors in the market and maintain high entry costs. Although there is no taxation on minor gambling, revenue is created through fees for permits for the major art unions and for major bingo centers. According to the Queensland Government (1998), the total license fee collected for minor gaming in 1997/1998 was AUS$2.9 million.

Unsurprisingly, employment in the gambling industry increases in the community or region where gambling occurs. The Australian Bureau of Statistics (ABS) compiles annual statistics on Australia's gambling industries. In 1994/1995, there were 48,618 Australians employed in pubs, bars, and taverns with gambling facilities and 53,181 employed in clubs with gambling facilities. Table 45 compares employment levels for pubs, taverns, bars, and clubs with and without gambling facilities. Table 46 shows employment levels during 1994/1995 in pubs, taverns, and other facilities that offer gambling opportunities, commissions from gambling, operating profit before and after tax, and gross industry profit.

Clearly, there are many Australians employed in the gambling industry. According to a study by the National Institute of Applied Economic and Social Research (NIAESR) (1997), new gambling operations (i.e., EGMs and casinos) increased employment in Victoria by 34,000 persons (ACIL Consulting 1999). In 1994/1995, approximately 135,000 individuals were employed in gambling and related industries. Of this amount, it is estimated that 32,000 were employed in businesses where the predominant activity was the provision of gambling services. Nearly 103,000 individuals were estimated to be employed in clubs, pubs, taverns, and bars with gambling facilities (ACIL Consulting 1999).

New money introduced to a country or region by tourists is one of the principal tangible benefits of providing the opportunity for people to gamble. The Australian Casino Association estimates that one million overseas tourists visit Australian casinos each year (ACIL Consulting 1999). According to ACIL Consulting (1999), following

Table 45: Employment levels in Australia in businesses with and without gambling facilities, 1994/1995

| | Pubs, taverns and bars | | Clubs | |
	With	Without	With	Without
Number of businesses	2,327	1,997	2,114	1,140
Number of employees	48,618	22,820	53,181	9,355
Average number of employees per business	21	11	25	8

Source: *ABS*, 1996, Cat No 8687.0

Table 46: Employment levels in Australia in businesses offering gambling, 1994/1995

| | Gambling Industry | | | Other venues offering gambling | |
	Lotteries	Casino	Other	Pubs, taverns and bars	Clubs
Number of businesses	178	14	1,849	2,327	2,114
Number of employees	2,006	15,837	14,219	48,618	53,181
Sales of G&S	4,099	1,643	9,699	3,385	—
Takings or commissions from gambling	3,997	1,383	9,627	576	—
Takings or commissions from gambling (percent)	97.5%	84.2%	99.3%	17.0%	—
Operating profit before tax	793	107	391	183	—
Operating profit margin (percent)	19.4%	6.5%	4.0%	3.9%	—
Industry gross profit	867	650	594	1,257	—

Source: *ABS*, 1996, Cat No 8687.0

the introduction of the *Jupiter* casino in late 1985, hotel occupancy rates on Australia's Gold Coast increased from 55 percent in 1985 to over 70 percent in 1988.

Australian gambling taxes are complex, varying by state and by gambling product. Some forms of gambling face flat taxes while others are governed by progressive tax structures, which may vary according to the size of the gambling facility (e.g., casinos pay higher taxes on EGMs than smaller operators). Older forms of gambling, such as horse racing, have a turnover tax. New forms of gambling tend to be taxed on expenditures (or on the percentage of the money lost by players).

The government also generates gambling revenues through the issuance of gambling licenses. These licenses create barriers to entering the gambling market by restricting the number of licenses available and by effectively requiring high purchasing rates for operators who wish to obtain a license. Table 47 shows the type of tax assessed on each of the major forms of gambling in Australia.

In Australia, gambling taxes are generally considered an acceptable method of revenue collection because gambling is popular among most taxpayers and voters and gambling taxation is under the control of the respective state governments rather than the national government. Governments earn approximately AUS$3.5 billion per annum from taxes levied on gambling. Most of these taxes are levied by state and territorial governments, which receive 11 percent of their taxation revenues from gambling taxes. The gambling industry is subject to higher rates of taxation than most other Australian industries and rates vary considerably for different forms of gambling (Australia's Gambling Industries 1999). In 1997/1998, revenue from taxes on gambling accounted for 10 percent of total state, territory and local government revenue (table 48).

In 1997, the state of Queensland introduced a tax scale based on the "metered win" (i.e., profit) retained by individual gaming venues. The progressive tax rate was intended to increase the competitiveness of small and medium sized clubs. The agreement was implemented in 1997/1998, lowering the levels of taxation for gaming machines located in hotels.

Economic costs

In Australia, both gambling and non-gambling industries have experienced the effects of substitution due to the introduction of new forms of gambling and the introduction of casinos and EGMs has resulted in reduced expenditures on race gambling. In testimony to the Productivity Commission, the Australian Retailers Association (ARA) reported that over the last two decades, retailing has lost considerable market share. In 1973/1974, retailing attracted 43 percent of total consumption expenditure;

Table 47: Major forms of taxation on various types of gambling

Gambling activity	Type of tax			
	On turn-over	On players' losses	On net profits	License fees
Bookmakers (racing)	♣[1]			♠[14]
Bookmakers (sports betting)	♣[2]			♠[15]
Casinos		♦[7]		♠[16]
Drawing-card machines	♣[3]			
Keno	♣[4]			
Lotteries				♠[17]
Lottery subscriptions	♣[5]			
Minor gambling (bingo, raffles, etc.)				♠[NA]
Off-course Totalisator investment			♥[12]	
Poker machines			♥[13]	♠[18]
Poker machines in hotels, clubs, casinos		♦[8]		
Racing				♠[19]
Sports betting				♠[20]
Sports betting (sports book)		♦[9]		
TAB sports betting		♦[10]		
Totalisator wagering on racing	♣[6]	♦[11]		

Jurisdictions applying taxes: (1) South Australia, Northern Territory, Queensland, New South Wales, Victoria, Tasmania, Australian Capital Territory. **(2)** Western Australia, South Australia, Northern Territory, Queensland, Tasmania, Australian Capital Territory. **(3)** Northern Territory. **(4)** South Australia, New South Wales. **(5)** Western Australia, South Australia, Queensland, New South Wales, Victoria. **(6)** Western Australia, South Australia, Northern Territory, Queensland, Tasmania, Australian Capital Territory.**(7)** All. **(8)** South Australia, Northern Territory, New South Wales, Victoria, Tasmania, Australian Capital Territory. (**9**) Victoria. **(10)** Western Australia, South Australia, Queensland, New South Wales, Victoria, Tasmania, Australian Capital Territory. (**11**) New South Wales, Victoria. (**12**) South Australia, Northern Territory. **(13)** Victoria. **(14)** All. **(15)** All. **(16)** Western Australia, South Australia, Queensland, New South Wales, Victoria, Tasmania, Australian Capital Territory. **(17)** All. **(18)** Queensland, New South Wales, Victoria. **(19)** All. **(20)** Western Australia, South Australia, Northern Territory, Victoria, Tasmania, Australian Capital Territory.

Source: *Productivity Commission* 1999: M.2

Table 48: Gambling taxation revenue (AUS$ millions), by state, 1997/1998

	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australian Capital Territory	Total
Lotteries and Lotto	290	286	166	77	79	19	11	11	939
Gaming machines	672	704	197	158	—	—	—	28	1,759
Casino	110	175	87	19	55	35	12	4	497
Race betting	265	127	92	58	36	9	8	5	600
Other	1	4	—	—	—	—	—	—	6
Total	1,338	1,296	543	313	171	65	31	48	3,805

Source: *ABS*, 1998 Cat No 5506.0.

by 1993/1994, this amount had decreased to 36 percent (Australian Bureau of Statistics, National Accounts and Retail Trade Statistics, 1974/1975 and 1993/1994). The main source of expenditure negatively affecting the retail industry is entertainment, including gaming. For example, between 1973/1974 and 1993/1994 the entertainment and recreation industries increased their share of expenditure by nearly 40 percent, or (using 1993/1994 prices) an additional AUS$20 billion in sales. This compares to additional expenditures over that time in the retailing industry of AUS$11 billion.

United Kingdom

Economic benefits

The National Lottery was established by the former Conservative Government to raise money for socially beneficial causes. In total, there are six "Good Causes," namely the arts, sports, charities, heritage, celebrating the millennium, and the new health, education, and environment cause. Out of every pound sterling spent on the National Lottery, approximately 28 pence are contributed to the Good Causes. It is projected that by the end of 2000 the National Lottery will have created over 100,000 jobs (table 49) (UK National Lottery 1999).

Table 49: Projected job creation from the National Lottery in the United Kingdom, by sector, in 1999 and 2000

	1999	2000
Construction and related professions	27,892	30,305
Managing and staffing new complexes	15,246	24,115
Jobs resulting from revenue projects	43,000	4,300
Retailing	18,860	18,860
Camelot's suppliers	580	580
Camelot	660	660
NLDF bodies	380	380
Total	67,918	79,200
Spin-offs and multiplier effects in year 2000	—	30,000
Total by year 2000		109,200

Source: UK *National Lottery*.

Munting (1996) addresses the importance of gambling taxes to government revenue. With the abandonment of lotteries early in the nineteenth century, government interest in gambling revenue was minimal. It was the reintroduction of gambling taxes after World War II that rejuvenated the appeal of gambling revenue to the government. Since gambling taxes were reintroduced in 1948, they have provided a significant proportion of total government revenue. A shift from direct to indirect taxes, a trend prevalent after 1979, resulted in an increase in the proportion of all government income derived from taxes on expenditure, though there was no effect on total tax revenues. Another trend evident with government taxation is that expenditure on gambling grows at a slower rate than on other products, resulting in adjustments to gambling taxes to maintain previous revenue levels (Munting 1996).

Smith (1998) reported that in 1996/1997, two percent of national tax revenue was derived from gambling. Furthermore, of the £72 billion wagered each year, government receives over £3 billion. Munting (1996) presents government revenue data for the period from 1966 to 1991 derived from the different forms of gambling available in Britain and from the overall gambling industry in the United Kingdom. The data show that the percentage of gambling revenue collected by government between 1966 and 1991 has increased for all forms of gambling with the exception of betting in soccer pools. Overall, government revenue from the taxation of gambling increased from £3.7 million (0.1 percent of total revenue) in 1966 to over £1 billion (6.0 percent of total revenue) in 1991.

According to the UK National Lottery (1999), the effective tax rate for the lottery (duty, plus Good Causes on stake, less winnings) is 80 percent. Thus, the true tax rate for the lottery is much higher than the "headline" quoted duty rate of 12 percent. Taxes on the lottery are also higher than for any other sector within the gaming industry. Overall, the revenue distribution of British lotteries is approximately 15 percent to administration, 30 percent to charities, 30 percent to prizes, and 25 percent to government coffers (*The Economist* 1992, cited in McGowan 1994).

Licensing also provides government with an alternative method of collecting revenues from gambling operations. Munting (1996) presents the number of bookmaker permits and betting-shop licenses granted between 1961 and 1990. Although the number of bookmaker permits peaked in 1968, the number of licenses issued has been in decline since that time. Betting-shop licenses, on the other hand, have increased markedly between 1961 and 1985, with a slight decline between 1985 and 1990 (table 52).

Table 50: Sources of tax revenue from gambling in the United Kingdom

	1966/1967		1970/1971		1981/1982		1990/1991	
	£millions	Percent	£millions	Percent	£millions	Percent	£millions	Percent
Betting duty	12.8	25.8	71.1	54.8	255.0	49.8	479.1	47.6
Pool Betting	32.2	64.8	45.3	34.8	176.0	34.4	303.9	30.2
Gaming License	1.5	3.0	1.7	1.3	11.6	2.3	57.4	5.7
Bingo	0.5	1.0	3.9	3.0	43.6	8.5	67.4	6.7
Gaming Machines	2.7	5.4	7.9	6.1	26.2	5.1	98.6	9.8
Total	49.7	100	129.9	100	512.4	100	1006.4	100

Notes: Actual total in 1966/1967 includes an additional £436,000 bookmakers license fees, subsequently discontinued; true total in 1970/1971 includes £400,000 betting premises license duty, subsequently discontinued.

Sources: Annual Reports for HM Customs and Excise; CSO Annual Abstract of Statistics.

Table 51: Government revenues from all taxes in the United Kingdom, 1947 to 1991, compared to revenue from taxes on betting and gaming (£millions at current prices)

	Revenue from all taxes	Revenue from taxes on betting & gaming	
		Revenue	Percent of total
1947/1948	4,011.3	3.7	0.1
1948/1949	4,108.0	23.4	0.6
1955/1956	5,160.4	28.2	0.6
1963/1964	6,890.2	33.3	0.5
1967/1968	11,227.3	67.9	0.6
1974/1975	23,570.1	238.4	1.0
1981/1982	76,755.0	512.4	0.7
1984/1985	98,246.7	660.9	0.7
1990/1991	102,366.1	1,000.4	0.6

Note: A pool-betting duty on football pools and dog-track totalisators was introduced in 1948. In 1964, fixed-odds football betting was made subject to this duty. From October 1966, a general betting duty was introduced on all betting with bookmakers and totalisators. The dog-track pool betting duty was superseded thereby though remained for football pools. Gambling duties were introduced at the same time as annual license charges for premises and gaming machines. These duties are aggregated in the table.

Sources: Annual Reports for HM Customs and Excise; CSO Annual abstract of statistics.

Table 52: Number of bookmakers' permits and betting-shop licenses issued, 1961 to 1990

	Permits	Shops
1961	9,944	8,802
1968	11,069	15,782
1971	9,414	14,462
1978	7,960	12,812
1981	7,576	11,993
1985	7,065	10,633
1990	5,406	10,081

Source: UK Government, betting office license statistics.

Economic costs

In 1951, a Royal Commission considered evidence from a number of sources about gambling and criminal activity and concluded that:

> Gambling is of no significance as a direct cause of serious crime, and little importance, at any rate at the present time, as a direct cause of minor offences of dishonesty. We do not doubt that there is not uncommonly connections to be found between dishonesty and excessive gambling in persons of generally dissolute character, but we should not regard this as evidence that gambling, in itself, is a cause of crime. (Cornish 1978: 68)

More recent evidence reveals a general consensus that the British gambling industry is relatively crime-free and that bettors, although offered numerous opportunities to break the law, generally do not. According to Rosecrance (1998), British gaming has enjoyed a reputation for honesty since 1968, when the Gaming Board was granted autonomous control over the gambling industry. Munting (1996) makes the critical observation that one of the reasons that crime has been considered a direct consequence of gambling is that betting and gaming used to involve breaking the law. Furthermore, gambling losses were believed to cause people to commit crimes and gambling believed to attract criminal elements. Today, just as no serious commentator would suggest that casino gaming in the United States is *sui generis* associated with crime, there is great confidence that the criminal element is minimized in the British gaming marketplace, where the Gaming Board has enjoyed draconian control for more than 30 years.

Gambling on Indian reservations

Indian casinos have channelled a staggering amount of money to some of America's most wretched places.

The Economist (July 15, 2000)

Most of the available research about gambling on Indian reservations has been carried out in the United States. Consequently, this section will focus exclusively on gambling on Indian reservations in the United States. Due to provisions in the American Constitution and subsequent laws and treaties with particular tribes, those tribes are effectively recognized as separate nations and are provided with an unique form of sovereignty. According to these provisions, state laws do not apply to Indians living on reservations. The main responsibility of the federal government is to protect tribes' self-governing status and tribal property rights. Although Indian reserves are considered sovereign entities, tribal governments will occasionally adopt local building, health, or safety codes as law. State and local governments usually provide the infrastructure, such as roads and bridges, near reservations that operate tribal gambling facilities.

According to the Bureau of Indian Affairs (BIA), 554 federally recognized tribes with 1.65 million members, exist within the United States. This represents less than one percent of the American population. Of these tribes, 146 offer Class III gambling under the terms of 196 tribal-state compacts.[4] In 1988, approximately 70 Indian casino and bingo halls operated in 16 states; by 1998, approximately 298 facilities were operating in 31 states (NGISC 1999b).

Heightened interest in large-scale Indian gambling came to the forefront in 1987, when the Indian gaming industry began to experience rapid growth. As an emerging

[4] Class I consists of traditional tribal games and social games for prizes, which are subject solely to tribal regulation. Class II consists of bingo, instant bingo, lotto, punch cards, and similar games and card games legal anywhere on the state and not played against the house. Class III consists of all other games (other than those in class I and class II), including electronic facsimiles of games of chance, card games played against the house, casino games, pari-mutuel racing, and jai alai (NGISC 1999b: 6–8).

industry, Indian gambling was perceived to require a regulatory framework to ensure its success. Consequently, in 1988 the US Congress passed the *Indian Gambling Regulatory Act* (IGRA), which provided the necessary statutory framework to oversee Indian gaming facilities. Also in 1988, the National Indian Gaming Commission (NIGC) was established by the IGRA as an independent agency within the federal Department of the Interior. According to Cornell, Kalt, Krepps, and Taylor (1998), over the following two years the NIGC conducted 500 visits to Indian gaming operations in 25 states, resulting in 55 enforcement actions against violators of IGRA and NIGC regulations. In 1997, the NIGC collected more than US$1 million in fines and operating fees of approximately $1.5 million. Indian gaming revenues in 1997 consisted of 39 percent of revenue from fees, 35 percent from cost reimbursements, and 26 percent from appropriations. Indian gaming revenues increased from approximately US$212 million in 1988 to more than $6.7 billion in 1997 (NGISC 1999b). The NIGC has successfully brought more than 95 percent of tribal gambling facilities into compliance with federal law. Although the NIGC's original purpose was to focus on the regulation of Class II gambling, the rapid growth of Class III gambling ultimately resulted in greater emphasis on Class III gaming as well.

According to the National Research Council, "The recent institutionalization of gambling appears to have benefited economically depressed communities in which it is offered" throughout the United States (NRC: 1). One of the most striking examples has been the tremendous improvement in various social indicators on Indian reservations. Before the establishment of legal Indian gambling, many tribes lived in desperate conditions. Poverty and unemployment rates of Indian American tribes were the highest of any ethnic or racial group in the United States and per-capita income, education levels, rates of home ownership, and other social indicators were among the lowest (table 53). The growth of Indian gambling has stimulated the reservations' once stagnant economies, improving the social well-being of many Indian tribes.

Revenues derived from gambling operations have allowed many tribes to make unprecedented improvements in economic and social health. Gambling revenues are used to support many tribal government services, including tribal courts, law enforcement, fire protection, water, sewer, solid waste, roads, environmental health, land-use planning, and other social welfare programs. Indian gambling facilities provide approximately 100,000 jobs for tribal members in areas where unemployment rates often previously exceeded 50 percent of the adult population (NGISC 1999b). Although critics of gaming argue that employment in the gaming industry consists of relatively low-paying jobs and, therefore, should be discounted, the fact remains that the employment rates on reservations have increased as a result of legalized gambling. Furthermore, as shown in table 54, the Sault Ste. Marie Tribe of Chippewa Indians, for example, had a higher proportion of gaming workers earning above US$20,000 annually than it did non-gaming workers.

Table 53: Indicators of social health in the United States for Native Americans on reservations compared to all races (1989)

Indicator[1]	Average for Native Americans on Reservations and Trust Lands	Average for United States
Income and Employment		
Median Household Income	$12,459	$30,056
Per Capita Income	$4,478	$14,420
Unemployment Rate	25.6%	6.3%
Poverty Rate	50.7%	13.1%
Child Poverty Rate	55.3%	17.9%
Household Receiving Public Assistance Income	18.7%[2]	7.5%
Income and Employment		
High School Graduates	53.8%	75.2%
College Graduates	3.9%	20.3%
Children and Families		
Families with Female Head	31.6%	20.4%
Single Parent Families	50.3%	24.0%
Housing		
Owner-Occupied Homes	69.7%	64.2%
Homes Lacking Complete Plumbing	17.0%[2]	1.2%
Homes Lacking Complete Kitchen	15.2%[2]	1.2%
Homes with Telephone	71.6%[2]	94.8%

[1] Unless otherwise indicated, figures given are for the Native American population (including American Indian, Eskimo and Aleut) on reservation and trust lands. [2] Figures are for total population on reservation and trust lands.

Source: Cornell, Kalt, Krepps, and Taylor 1998: 25.

Table 54: Distribution of salaries among Chippewa Indians (Sault Ste. Marie tribe) employed in the gaming and in other industries, 1997

Annual Salaries	Gaming	Non-Gaming
> US$15,000	44%	18%
> US$20,000	17%	5%
> US$25,000	6%	2%
> US$30,000	3%	1%
> US$35,000	2%	< 1%
> US$40,000	2%	< 1%
> US$45,000	1%	< 1%
> US$50,000	1%	< 1%

Source: Information provided by the tribe.

Before establishing a casino, the St. Regis reservation (population 18,000) was in need of 20 miles of water lines, sewer lines, employment opportunities, and a high school. In an interview with *The New York Times* on March 1999, Chief Hilda E. Smoke, who once was adamantly opposed to casinos on her ancestral land, explained that casinos were a way for the tribe to get out of poverty. The US$30 million casino is expected to bring in annual revenues of US$100 million, with a net profit of more than US$40 million.

Cornell, Kalt, Krepps, and Taylor (1998) present allocations from gaming revenue intended by a number of Indian tribes (see table 55). In 1997, the Ho-Chunk nation allocated 25.6 percent of its gaming revenues to tribal economic development, including a proportion designated for loans to tribal entrepreneurs. The Rock Sioux tribe assigned 59 percent of gaming revenues to health and human services and established several businesses, including a hotel, an RV Park, a recreation area, and a yacht marina. All of these businesses were made possible due to the influx of visitors to tribal gaming facilities. As shown below, the revenue generated from gambling has ostensibly been used, for the most part, to improve overall conditions on Indian reserves throughout the country.

Table 55: Expenditures from gaming revenue and federal and state transfers as percent of tribal budget, 1997

Allocation plan	Category	Percent of Revenues	Transfers
Ho-Chunk[1]			
Yes	General welfare of tribal members	52.26%	
	Tribal economic development	25.55%	
	Tribal government operation	16.27%	4%
	Local government services	5.72%	
	Charitable donations	0.20%	
Mohegan[3]			
Yes	Tribal government operations[3]	45.57%	
	Regulatory compliance and safety	23.87%	
	Tribal economic development	13.68%	
	Capital expenditures	6.55%	> 2%
	Education	3.71%	
	Health and human services	3.61%	
	Cultural	3.01%	
Oneida[1]			
Yes	General welfare of tribal members	58.97%	
	Tribal government operations and programs	27.72%	
	Tribal economic development	8.72%	7.9%
	Per-capita payments to elderly members[5]	2.81%	
	Local government operation (supplemental)	1.37%	
	Charitable donations	0.42%	

Allocation plan	Category	Percent of Revenues	Transfers
Sault St. Marie Chippewa			
No	Gaming revenues are primarily used for tribal economic development, funding tribal government operations, and creating tribal self-efficiency funds.	N/A	44%
Standing Rock Sioux			
No	Tribal government operations		
	Health and human services	59.00%	
	Economic development	23.00%	
	Education	7%[8]	66%
	Cultural	6.00%	
	(Tribe does not make per-capita payments)	5.00%	

Notes: [1] Includes per-capita payments for fiscal year 1998. The budgeted amount for per-capita payments is $48,600 or 46.53%. [2] Data for the period from January 1, 1971 to April 1, 1998. [3] The tribe's Gaming Revenue Allocation Plan was approved by the Federal Government in late 1997 and resulted in modest semi-annual payments to the memberships. Two payments of $1,500 have been made so far. [4] Since the introduction of Class III, the Mohegan Tribe has adopted a policy of not seeking or accepting any Federal assistance or grant funding with the exception of its contracts with the HIS and BIA. Furthermore, the tribe is considering reducing the amount of government assistance from these programs to a token sum of one dollar. In early 1997, the tribal actually returned $3 million received from HUD so that less advantaged tribes would benefit. [5] In fiscal year 1998, the per-capita payment to elderly members of the tribal will be $2,000 each. [6] This figure shows the percentage of total tribal "funds," including gross gaming and non-gaming revenues, that comes from government grants. Thus, the percentage of government transfer payments out of net tribal funds is higher than this figure. [7] Data is for 1998 tribal budget. [8] Revenue breakdown is summarized from individual line item payments, excluding loan repayments. Data is for 1994–1997.

Source: Information provided by the tribes.

As discussed in an earlier section, opponents of gaming often argue for its prohibition by citing an increase in the incidence of crime due to the introduction of gambling. Table 56 shows the number of crimes committed per 100,000 people before and after the introduction of Indian gaming in counties where gaming was introduced in the 1990s.

Analysis of the data reveals no correlation between the introduction of gaming facilities and higher incidence of crime. Some tribes experienced minimal increases in the incidence of crime, while others experienced a decrease in the number of crimes committed after the introduction of gaming facilities. In other words, the randomness of changes in incidences of crime indicate that there is little, if any, relationship between the introduction of gambling opportunities and crime rates.

The taxation of Indian gambling has generated a great deal of debate about the Indian gambling industry. Because Indian tribes are self-governing entities, they are not subject to federal income tax. If Indian tribes own casinos, for example, net revenues go directly into the hands of tribal governments. The IGRA requires that revenues acquired by Indian gambling facilities be used for tribal governmental services and the economic development of the tribe. If gaming revenues are used for these purposes, they are not subject to federal taxes. Furthermore, state income taxes do not apply to Indians who live on reservations and earn their income from tribal enterprises. State income tax does apply to non-Indians working at Indian casinos, Indians who live off the reservations, and to Indians who live on reservations but earn their income from non-tribal operations. However, many tribes have agreed on voluntary payments to neighbouring communities to compensate the latter for the provision of services, such as fire protection, ambulance, and other similar services.

Table 56: Visitor-adjusted[1] crime rates in counties containing tribal casinos before and after the introduction of gaming

Tribe	County	First full year of operation	Index crimes[2] reported per 100,000 population in gaming						
			1990	1991	1992	1993	1994	1995	1996
Ho-Chunk	Jackson, WI	1993	3,376	3,875	3,834	3,615	3,748	3,177	3,910
	Sauk, WI	1993	2,968	2,863	3,087	2,848	3,310	N/A[3]	3,869
	Wood, WI	1993	3,180	3,273	3,044	3,489	3,104	2,858	3,214
Mashantucket Pequot	New London, CT	1992	4,943	5,194	3,650	3,734	3,268	3,495	3,178
Oneida	Brown, WI	1992	4,008	4,110	3,731	3,705	3,715	3,846	3,716
Sault Ste. Marie Chippewa	Chippewa, MI	1992[4]	3,419	3,025	3,437	2,949	2,811	2,176	2,602
	Mackinac, MI	1991	7,467	5,591	4,655	4,828	5,650	5,640	4,242
Standing Rock Sioux	Sioux, MD and Corson, SD	1994	N/A	N/A	2,291	675	2,415	392	174

Notes: [1] Visitor adjustment is performed by adding the estimated number of daily casino visitors to the resident population of the county when calculating crime per 100,000. For the Sault Ste. Marie Chippewa tribe, Ho-Chunk nation, and Standing Rock Sioux tribe, daily casino visitors are estimated using actual 1997 casino visitation data. For other tribes, daily casino visitors are estimated based on the population within a 50-to-100-mile radius of the casino and the known propensity for individuals within that distance from the casino to patronize the casino. [2] Index crimes are the sum of known offences and arrests for murder, manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny, and motor vehicle theft. [3] Incomplete statistics reported for 1995. [4] The Sault Ste. Marie Tribe has operated a casino in Chippewa County since 1985. Prior to 1991/1992, when the casino went through a major expansion, the casino was very small.

Source: *FBI*; Information provided by the tribes.

Regulation of Internet gambling

Advances in computer and telecommunications technology have increased the availability of gambling. New technology holds the potential to change the subjective experience of gambling and to increase how often, how much, and how long people gamble.

The National Research Council

Internet gambling sites offer a variety of gaming opportunities including casino-style gaming such as blackjack, roulette, poker, and other traditional table games. Also available on the Internet are on-line casinos, lotteries, bingos, and sports betting. What distinguishes Internet gambling from more traditional forms of gambling is the physical separation between the service provider and the consumer. It is estimated that there are 200 million people worldwide who now have access to the Internet (Sama 1999). As such, the Internet offers these potential consumers convenient and inexpensive access to their favorite gaming sites, introducing competition into an industry once dominated by highly restrictive licensing practices.

Size of the Internet gambling market

A number of analysts have attempted to estimate the size of the Internet gambling industry. As of May 1998, the NGISC (1999b) identified approximately 90 on-line casinos, 39 lotteries, eight bingo games, and 53 sport books. One year later, the NGISC estimated that over 250 on-line casinos, 64 lotteries, 20 bingo games, and 139 sport books were available via the Internet. Sebastian Sinclair, a research consultant with Christiansen/Cummings Associates, estimated the number of gamblers participating in Internet gambling at 6.9 million in 1997 and 14.5 million in 1998. Sinclair also estimated revenues from Internet gambling of US$651 million in 1998, and forecast an increase to US$2.3 billion by 2001.

The Australian research firm, ACIL Consulting, on the other hand, offers a more conservative estimate of the size of the Internet gambling industry. It claims that there are approximately 35 to 40 sites currently available worldwide that offer mainly

casino-style games. Most of them are located in the Caribbean and appear to be government-licensed. Although ACIL Consulting concluded that estimating the exact dollar value is highly problematic, there is a general consensus that the on-line gambling industry will experience significant growth (ACIL Consulting 1999).

Regulation or prohibition?

> *Internet games and the high level of privacy they offer may exacerbate problem and pathological gambling. Access to the Internet is easy and inexpensive and can be conducted in the privacy of one's own home. Shielded from public scrutiny, pathological gamblers can traverse dozens of Web sites and gamble 24 hours a day.*
>
> The National Gambling Impact Study Commission

Most opponents of on-line gambling share concerns similar to those expressed by the NGISC commissioners (whose report recommended a ban on Internet gambling). These critics believe that, because the Internet may be used anonymously, there is the potential for abuse of Internet gambling both by those unable to control their gambling and by underage gamblers: that the privacy provided gamblers by the Internet will exacerbate problem gambling and provide underage gamblers with the opportunity to use their parents' credit cards, or even their own, to set up Internet gambling accounts.

McMillen and Grabosky (1998) compiled a list of problems pertaining to Internet gambling sites. These include:

- ◆ gambling sites may not be legitimate
- ◆ service providers may simply take gamblers' money and shut down or fail to pay any winnings
- ◆ gamblers have little recourse against illegitimate or unfair gambling sites because there is no protection stemming from government licensing and regulation
- ◆ gamblers' credit-card details are necessary to play on internet gambling sites
- ◆ on-line facilities may be used for money laundering.

Another concern about Internet gambling is that the lack of accountability in the industry may increase the potential for criminal activities including money laundering, unpaid winnings, and computer hackers manipulating software programs to their own benefit.

However, there are regulatory mechanisms that may be employed to ensure that consumers are protected and the activities of the criminal element minimized. For example, to prevent money laundering, the state should restrict the amount (or frequency) of cash deposits into players' accounts. Although there is concern about the legitimacy of all Internet gambling sites, most operate as legitimate businesses and, like any reputable business, rely on a strong customer base to remain profitable. The necessity of maintaining a strong customer base will motivate service providers to offer legitimate gambling sites.

There is concern that the autonomy provided by the Internet may also encourage abuse of this form of gaming. Once again, sensible regulation may be the solution. Australia has a number of jurisdictions where Internet gambling is legal. According to ACIL Consulting (1999), it would be difficult to open an account under the alias of another person's name as it would require developing a false identity, along with supporting documents such as a passport or drivers license.

Opponents to gaming also propose the prohibition of Internet gambling on the grounds that it is easily accessible by underage players. There are a number of reasons why this claim is unfounded. First, when opening an Internet gambling account, players are required to enter a password in order to play. Even if a child acquires the account password, money has to be deposited into the account before gambling can occur. Second, there is concern that children may use their parents' or their own credit cards to gamble. It is important to remind ourselves that restricting access to a parent's credit card is not the responsibility of the gambling (or any other) industry but rather the responsibility of parents themselves. Additionally, if an individual is considered responsible enough to have a credit card, should not the choice to gamble remain with the individual? Even if underage players are able to acquire a credit card, they are still required, by most sites, to provide other sources of identification. Finally, technology (e.g., blocking and filtering devices) is available to parents and schools to restrict access to Internet gaming sites.

The emerging Internet gambling industry has demonstrated the potential for tremendous growth. Although estimates of the market potential of web-based gambling vary, there is a consensus that the market is expanding and will experience exponential growth (ACIL Consulting 1999). This further suggests that prohibiting on-line gaming would be extremely difficult. Attempts to prohibit Internet gambling in industrialized countries have resulted in many Internet gaming sites being established in small nations with little or no government regulation.[5]

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[5] For a topical British illustration of the competitive market's ability to circumvent domestic taxation demands placed upon Internet gambling, see Evans 2000.

There are a number of arguably insurmountable challenges faced by governments that endeavour, as recommended by the NGISC, to criminalize on-line gambling. According to McMillen and Grabosky (1998), there is a great degree of surveillance required to detect on-line illegality and there are difficulties in locating, investigating, and prosecuting on-line offenders. In addition, the technological and human capital required to locate offenders is substantial, as are the costs of prosecution and incarceration. Along with the inefficient use of resources caused by prohibition, there is the threat of unintentionally increasing the criminal element. Current estimates of market potential for this burgeoning industry show there is a demand for Internet gambling. The fact is that, if the marketplace demands Internet gambling, Internet gambling will be supplied with or without government consent. This is especially true given service providers' unrestrained access to overseas Internet sites in jurisdictions without Internet gambling restrictions. Furthermore, Bell (1999) argues that the inevitable failure of prohibition is attributable to two factors: first, Internet technology renders prohibition futile since, as an international network, the Internet provides an instant detour around domestic prohibition; and, second, consumer demand for Internet gambling and the state's demand for tax revenues will create enormous pressure for legalization.

Jurisdictions that have chosen to ban Internet gambling ultimately will spend a substantial proportion of scarce resources in the regulation and policing of Internet gaming. As explained by McMillen and Grabosky, "Here we begin to see a situation where if one jurisdiction outlaws Internet gambling, it could be forced to bear all the costs of enforcement, while the gambling revenues continue to flow into other jurisdictions" (1998).

Unlike the United States, Canada has embraced a more passive approach to regulating the Internet gaming market. Currently, American opponents to gaming are aggressively seeking to prohibit Internet gambling. Canadian legislators appear to be waiting for the international gaming structure to be established before determining the appropriate level of regulation. At present, Canadian gaming legislation provides provincial governments with exclusive jurisdiction over the management of lottery schemes operated on or through a computer, video device, or slot machine. Although the legislation does not restrict the medium through which provincial governments may offer machine gaming, it has been suggested that current legislation permits a province to offer Internet lottery schemes (Sama 1999). Thus far, the provinces have opted not to conduct lottery schemes via the Internet.

The American debate surrounding Internet gambling has been heightened due to the introduction of the *Internet Gambling Prohibition Act of 1999*, which seeks to update the *Wire Communications Act* in an attempt to prohibit on-line Internet gambling. At

the national level, these efforts have been spearheaded by Republican Senator Jon Kyl of Arizona and Democratic Representative Robert Goodlatte of Virginia. Although the US Senate endorsed Kyl's anti-Internet gaming Bill in 1999, the legislation failed to receive sufficient support in the House of Representatives when it was introduced on July 17, 2000. If the Kyl Bill had become law, the penalty for businesses offering gambling over the Internet would have been a US$20,000 fine and company executives could face imprisonment for up to four years. Individual bettors would have been penalized according to whatever state laws applied within the jurisdiction where the offence took place.

In analyzing the merits of this legislation, Lisa S. Dean, vice president for technology policy for the *Free Congress Foundation*, offers the following insight:

> When the sponsors of this legislation talk about banning Internet gambling, what they are really talking about is state lotteries because it (the legislation) essentially states that all Internet gambling should be prohibited—except gambling on horse racing, dog racing and similar activity. Why such broad carve-outs? If the sponsors say they want to ban gambling on the Internet, why not ban some of the most popular forms of gambling, namely horse racing, on the Internet? … This bill allows for some Internet gambling, but outlaws other forms which boiled down, is nothing more than the federal government picking winners and losers in the marketplace. Where does the federal government get the moral or legal authority[6] to say that a bet on the Kentucky Derby is acceptable, but a bet on the Super Bowl is not? (Dean 2000)

There is also controversy over the applicability of the phrase "wire communications" to the Internet, which potentially influences the regulation of other, future technologies. According to the *NGISC* (1999b), the debate whether the intent of the original anti-Internet gambling bill was to include all wire communications devices may be moot because future technologies may enable individuals to bypass cables and telephone wires when establishing connections to the Internet. However, although there are many Internet gambling sites already established overseas by American operators, the state governments of Louisiana, Texas, Illinois, and Nevada have introduced or passed legislation specifically prohibiting Internet gambling.

Australia has been both progressive and forward-looking in determining a more efficient market structure for Internet gambling. Australian regulators view the

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[6] Under the American Constitution, gambling legislation is primarily the responsibility of individual states.

Internet gaming industry as merely another form of electronic commerce that does not require prohibition. Australia legislators have attempted to develop a regulatory framework to allow licensed operators to offer Internet gambling sites through the Draft Regulatory Control Model for New Forms of Interactive Gambling (the "Draft Model Code," or DMC). The DMC does not propose federal government action to block the entry of overseas gambling sites provided over the Internet by foreign satellites (*ACIL Consulting* 1999).

In 1998, Queensland's state government introduced the *Interactive Gambling (Player Protection) Act*. The Act enables players to limit the amount of an individual bet, both at one time and cumulatively over the Internet. For example, these limits could be applied to the wagering on a particular game or by determining a maximum amount that may be wagered by a player over a period of time. Another benefit of the legislation is that if a person is concerned that their own or another's gambling habits may threaten the well-being of the player or the player's family, an application may be made to the state government to have them banned from participating in any licensed interactive gaming activity.

Although there appears to be a more tolerant attitude toward Internet gambling in Australia, there are two issues raised by the acceptance of Internet gambling: taxation, and encryption and security. ACIL Consulting (1999) notes that most countries, including the United States, generally accept the taxation model of the European Union (EU): consumption taxes apply to electronic commerce as they do to other forms of commercial activity. An alternative is the introduction of new taxes, such as a "bit" or "click" tax. A bit tax is similar to a turnover tax: every time a transaction is made over the Internet, a tax is collected. This is not a feasible alternative because the frequency of wagering makes the tax potentially greater than the income derived from gambling activities.

Both the speed and anonymity of electronic transactions make it difficult for State tax authorities to monitor who is earning income from Internet gambling. This is further impeded by encryption and security devices used by service providers to protect themselves and their consumers. Consequently, it may be in the best interest of legislators to focus on the service provider rather than the customer. Australia, for example, is not inclined towards taxing personal winnings from gambling but applies heavy taxes to gambling income earned by service providers. Although this appears to be a more efficient means of collecting taxes from Internet-based providers, there is also the issue of overseas providers who are not required to report income to the Australian government. Furthermore, the introduction of Internet gaming makes the traditional method of regulation and high taxation an inefficient and ineffective means to collect gambling taxes.

THE FRASER INSTITUTE

According to Bell (1999), 25 countries have licensed or passed legislation permitting Internet gambling services. Attempts by government to prevent customers from accessing gaming sites are easily circumvented by the structure of the Internet. For example, Internet gambling operators are able to change the addresses of their respective Web sites quickly and inexpensively while continuing to use their identifiable domain name and customers can be easily notified about address changes via e-mail.

One of the primary benefits of allowing Internet gaming is that competition will be introduced into a marketplace that is highly regulated and dominated by licensed providers that monopolize the gaming market. Increased competition results in a more efficient allocation of resources as gaming providers attempt to maintain and attract new customers. This form of gaming also encourages businesses in the private sector to develop their network capacity and commerce. Not only will this increased competition result in a wider range of gaming activities but consumers will have cheaper and easier access to these gaming activities.

Overall, the prohibition of Internet gaming services does not resolve concerns about the negative impacts of web-based gambling: "Banning Internet gambling puts in place market structures that encourage criminal behaviour: the very things that prohibition is supposedly designed to counteract" (ACIL Consulting 1999). Banning Internet gaming in the domestic market will ultimately result in the establishment of Internet gaming sites overseas. Banning on-line gaming results in the inefficient allocation of limited government resources because, as other jurisdictions identify the demand for Internet gaming, they will supply this service to consumers. Consequently, the resources spent on regulating Internet gaming will dissipate without effecting the desired change. Bearing in mind the complex technical structure of the Internet, therefore, the prohibition of Internet gaming would have to take place at a global level to ensure the effective regulation of the industry.

The case for privatizing gambling

A regulatory equilibrium exists where politicians act in a way that maximizes political returns. Because politicians are elected, they will follow whatever course of action will most likely ensure re-election.

Sam Peltzman

If gambling is legal, the industry should be in the hands of the private sector because, in most areas of economic activity, privatization leads to greater efficiency and the wider availability of products and services. This is the case because private companies have strong incentives to provide better services at reasonable prices (Bourcheding *et al.*). If a private company is unprofitable or closes, the losses are shouldered entirely by the investors. Publicly owned companies, on the other hand, have fewer incentives to provide reasonably priced products because such business ventures operate at the expense of the taxpayer. In other words, the government does not bear the risk of being unprofitable and closing; rather, the risk is borne by taxpayers.

A strong argument may be made for the privatization of gambling operations publicly owned at present. Our opposition to State-owned gambling operations centres around a lack of confidence in the ability of the State to remain objective when considering the public interest, since it serves as both the regulator and the principle beneficiary of gambling activities. The government's claims to objectivity in regulating the gambling industry are questionable as the public's demand for increased social spending pressures governments to spend more money without increasing personal income taxes.

In many countries, the State has granted itself a monopoly over the gambling marketplace. These government monopolies detract from the overall quality of the gambling industry by limiting competition and maintaining artificially high prices (e.g., lower pay-out ratios). By limiting entrants to the marketplace, the motivation to ensure a more efficient allocation of resources in order to attract new customers is essentially eliminated. Moreover, enterprises with diminished competition have attenuated incentives to offer an inexpensive range of diverse, quality products.

Government-owned casinos constitute the ultimate test of the government's ability to quell its own self-interest in the name of the public good. Two opposing views prevail concerning whether casinos should be publicly or privately owned. The Commission on the Review of the National Policy toward Gambling in the United States found practical difficulties in the government's taking direct responsibility for casino operations, namely that the government would be responsible for actively promoting the entertainment business. Furthermore, casinos are not always successful and, thus, the government may find itself at risk of financial loss.

Proponents of government ownership, however, view private operators as a threat to the integrity of casinos and believe that public ownership eliminates the threat of greed overcoming regulatory policies that prevent excessive gambling. Furthermore, proponents of government ownership claim government-run casinos are more feasible because 100 percent of net profits go to public coffers, criminals are more easily excluded, and the public will have greater confidence in the integrity of the casino's ownership (UNLV International Gaming Institute 1996).

In Canada, the government is both the regulator and beneficiary of gambling activities. Many critics of gambling are concerned about government's increased dependence on gaming revenues and its perceived lack of attention to the negative impacts of gaming. Under the Canadian Constitution, the federal parliament has jurisdiction over the criminal law and imposes restrictions on gaming activities. Therefore, provincial legislation or regulation regarding gaming must be practised within the limits of the Criminal Code. If a conflict occurs between provincial legislation and criminal law, provincial legislation is deemed null and void. In other words, the provinces' ability to regulate, operate, or license gaming is limited and may only be exercised within the provisions established in the Code (Sama 1999).

In today's Canadian gambling marketplace, it is not uncommon to observe governments that are directly involved in the promotion and organization of gaming activities. For example, lotteries in Canada are owned and operated exclusively by government. Government control over the gambling industry is enforced by the licensing of gaming venues, heavy taxation on gamblers, and a restriction on the number of gaming venues and the type of gaming opportunities provided to the public. Although the structure of the gambling industry varies from province to province, gambling regulation is often delegated to provincial gaming commissions and similar regulatory bodies.

In the American context, the NGISC (1999a) stated:

> Because the government determines the level and type of competition to be permitted—granting, amending, and revoking monopolies, and restricting

or enhancing competition almost at will—they are also the key determinants of the various industries' potential profits and losses (NGISC 1999a: 1–4).

Currently, governments perform a number of distinct roles in the gambling industry. First, as a prohibitor, government may enforce gambling prohibition by vigorous policing or by enacting laws that make it illegal to gamble. Second, as a passive observer, government permits the operation of private social gambling without regulation or oversight. Finally, as a quasi-entrepreneur, government owns and operates gambling operations as public enterprises.

American casinos, for example, are organized in a number of ways: owned and operated by government; owned by government and operated by the private sector; casino gaming on ships; casinos on Indian reserves; and "destination" casinos that offer many amenities including hotels and entertainment. According to Hughes (1996), the rise of the casino in the 1980s and 1990s has embodied a new form of state interventionism: state-sanctioned, privately-owned, monopoly enterprises that are highly centralized, highly taxed, highly promoted, and intimately connected with a government's objectives for the development of tourism and entertainment in its jurisdiction. American state governments, like Canada, Australia, and the United Kingdom, maintain autonomous control of the gambling industry by granting themselves the authority to operate lotteries, limiting the number of gaming machines permitted in gambling venues, and by imposing high levels of taxation on gambling products.

There are four major controls imposed on gaming by government:

(1) licensing, that is, the process by which government grants persons the right or privilege to offer games to the public;
(2) operational controls, that is, the rules that government adopts to govern the conduct of the gaming operators and the games they offer;
(3) the setting of taxes imposed on the industry; and
(4) a system of accounting and audits that ensures that operators properly account for all revenues.

Other areas that government regulation may address are price controls, disputes with patrons, and design, location, and aesthetics of buildings (UNLV International Gaming Institute 1996).

Private British gaming has been considered well-regulated and fair since the establishment of The Gaming Board for Great Britain in 1968. Although both private or public companies may run British casinos, there are no State-run casinos in Britain. The National Lottery is privately operated under a government-granted monopoly.

Betting on sports, horse racing, and other forms of pari-mutuel racing is operated by private enterprises under strict government regulation. Finally, "amusement-with-prizes" (AWP) machines are licensed by local government and are found in pubs, amusement arcades, and cafes (Munting 1996).

In Australia, most of the gambling industry operates under some form of government-granted monopoly. For casinos, telephone account betting (TAB), and lotteries, gambling facilities conduct business under government supervision in the form of strict regulation, licensing, and heavy taxation. In return, most gambling providers are granted the exclusive right to conduct gambling operations within a region for a specified period of time. Furthermore, government limits the supply of gambling services, such as gaming machines, by restricting the forms of gaming permitted in a gambling venue and placing a cap on the number of available machines.

However, when the availability of gaming venues is limited by monopoly rights, consumers have less access to gambling than would be available in a competitive market. In addition, government restrictions on the availability of gaming machines reduce the benefit to consumers by limiting consumers' choice of venue. For example, the *Casino Windsor* monopolizes the local gaming marketplace, as the Ontario provincial government announced that only one casino would be permitted to operate in the area. Moran (1998) presents an example in Victoria (Australia) where the number of machines permitted (27,500) represents a shortage in comparison to the number of machines demanded by consumers (estimated at over 30,000).

There is growing public concern over the conflict between the government's role as both the regulator and the beneficiary of gambling activities. As government-owned gambling operations strive to remain profitable, it becomes difficult to ascertain how the government can serve as both an adequate and objective regulating agency *and* a beneficiary of gambling:

> Whatever the insufficiencies of the revenue base currently available to the state governments, the pursuit of gambling-derived revenue (over and above uniform taxation on income or expenditure) is not compatible with government declarations of neutrality in relation to moral arguments about gambling. (Hughes 1996: 4)

Clear evidence of the conflict between public interest and government self-interest appeared in British Columbia after the RCMP launched an investigation into a conditional casino license granted by then-Premier Glen Clark. It is alleged that Clark used his political influence to grant an acquaintance a casino license. In June 1999, the British Columbia provincial government announced its intention to create an

independent, arm's-length agency to regulate the gambling industry. The new regulatory structure promised revenue sharing for municipalities and guaranteed income for charities. The intent of the new regulatory agency was to remove politics from the industry.

Lotteries are the most widespread form of gambling in Canada and the United States and the only form of gambling that is a virtual government monopoly. In both countries, lotteries have become one of the most profitable government-owned enterprises. According to Abt (1996), American state governments take 6 cents from every dollar bet at racetracks and 7.5 cents from every dollar lost at casinos while they keep between 40 and 45 cents of every dollar spent on lottery tickets. There is an obvious irony surrounding the government awarding itself a complete monopoly over lotteries and becoming an active promoter of lotteries while simultaneously imposing a heavy "sin" tax on the purchase of lottery tickets.

The tax on gambling is often referred to as a "sin" tax because government imposes comparatively high levels of taxation as a means to discourage the proliferation of gambling activities. ACIL Consulting (1999) discuss the issue of the inequality of gambling taxation from the perspective of horizontal equity (equal treatment of equals) versus vertical equity (progression rather than regression in the tax burden across similar products). In terms of vertical equity, it may be argued that consumers of gambling products are treated unfairly compared to other forms of entertainment due to the high rates of gambling taxes. Furthermore, the current structure of gambling taxes in most countries results in horizontal inequity between the different forms of gambling and similar products in the marketplace.

Lamentably, governments have not established the right of individuals to gamble at the venue or game of their choice. As a result, there are high levels of taxation on gambling activities—a "sin" tax much higher than tax rates for other consumer goods or luxury activities. As discussed earlier, government dependence on gambling profits drives up the price of gambling by higher odds against winning or lower pay-offs. Abt (1996) explains that, despite the high level of taxation, by controlling the legalization and licensing of certain games and operators, government contributes to a monopoly situation that is extremely profitable. Therefore, the State's legalization policy grows out of its revenue needs rather than any moral framework or constitutional foundation.

The goal of taxation should be to raise the required level of revenue with the least overall "deadweight loss,"[7] or economic distortion. Furthermore, the tax system should not influence private purchasing decisions by favoring or discriminating against particular activities. In Australia, the effective consumption tax ranges be-

tween one to two percent for community services and food, 30 percent for gambling, 89 percent for beer, 130 percent for petrol, and 210 percent for tobacco. Considering the willingness of consumers to purchase gambling products regardless of price, there appears to be little justification for differential tax treatment of gambling products.

Overall, the high level of taxation imposed on gambling activities has become one of the most contentious issues surrounding the gambling industry. ACIL Consulting commented: "It is really quite perverse to be taxing the vast majority of gamblers and the venues in which they responsibly gamble, to support a very small number of those deemed to be 'problem gamblers'" (1999: xv). In Australia, taxation on the gambling industry averages between 60 percent to 70 percent in effective terms. The high level of taxation distorts consumer spending patterns as well as the provision of gambling services by discouraging consumers from spending their income on services they value more highly and limiting the ability of providers of gambling services to satisfy consumer needs (ACIL Consulting 1999). Overall, these existing tax arrangements for gambling appear to be both inequitable and excessive.

In Australia, for example, EGMs are taxed differently by respective state and regional governments. Generally, EGMs in hotels are faced with a higher tax rate than those in clubs, as hotels with EGMs are required to contribute to some kind of community support fund (ACIL Consulting 1999). The disparity between the taxes levied on gambling activities is especially apparent with state lotteries. Overall, in terms of both nominal and effective tax rates, lotteries are the most highly taxed gambling activity in Australia (this is also true of the United States, the United Kingdom, and Canada). Consumers of lotteries experience the highest tax burdens while the tax on casinos, as a proportion of expenditure, is the lowest of all forms of gambling activities. Furthermore, of all the gambling activities available in Australia, Canada, the United States, and the United Kingdom, lotteries provide players with the lowest odds of winning.

Government's dependence on revenue from lottery taxes has been publicly criticized because lotteries are considered both an excessive and a regressive form of taxation. The NGISC (1999) reported that of the 38 state lotteries, revenue from 10 of the state lotteries goes into general funds. Of the remaining states, 16 earmark all or part of lottery revenues for education, making education the most common use of American lottery funds. According to Beare and Hampton: "The State not only rules out competition but also is free to set arbitrarily the gaming tax, unrestrained by betting

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[7] Deadweight loss is the loss to society from an economic outcome differing from the social optimum.

trends, number of winners or similar considerations" (1984: 24). By granting itself a monopoly over lotteries, the government operates without competition. The absence of competition allows the State to acquire large monopoly rents, effectively generated by what may be considered an unreasonable consumption tax on lottery participants.

Further, when there is a monopoly controlled by government:

> the taxes that casinos pay to the state can be much higher in most circumstances. Thus, the casino will usually set odds more favorable to the house than it would in a competitive market. This pricing is a function of how many games the casino can offer before the cost of adding one additional game exceeds the revenues that can be derived from that game. The difference between when this point is reached in monopoly and competitive markets is that in a perfect competitive market the marginal revenue curve intersects the marginal cost curve at a lower output and a higher price. The effect is that the monopoly casino provides fewer games at higher odds, or institutes other costs to maximize profits (UNLV International Gaming Institute 1996: 96).

The success of the gambling industry depends on a high standard of integrity and regulation. In our view, the government best supports this goal by relinquishing its monopolistic control of the gambling industry, introducing competition among private enterprises while maintaining operational controls through independent government regulatory organizations. Without the government monopoly, businesses can enter and exit the marketplace freely and it will be market forces that determine the structure and size of the gambling marketplace rather than the government. With competition, consumer demand will be met, greater market efficiency will result, and the industry will move toward a more efficient level of operation. Furthermore, operating as a regulator and not as a beneficiary of gambling activities, government eliminates public concern about its conflicting role in the gambling industry. As Calvert (1999b) explains, even if the State were to relinquish its monopoly, governments could still profit from the taxation of private gambling operations. Moreover, deregulating the industry would alleviate public suspicion over the role of government as both regulator and beneficiary of gambling-derived revenues.

Privatizing lotteries and other gaming opportunities would increase gambling sales because private operators could advertise more aggressively. Advertising efforts could focus on niche marketing strategies, allowing service providers to target advertising and product development according to consumer preferences within specific demographic groups. Within the United States, for example, expenses would be reduced as privatized operations could employ more part-time employees rather than unionized

state employees. In addition, a privatized company has more incentive to provide a variety of games and to increase the percentage of winners from lotteries to maintain a strong customer base. Furthermore, if free competition among lottery firms were allowed, market forces would prevent firms from making "excessive" profits.

The success of the privatization of the sports-betting industry has been demonstrated in the United Kingdom. In 1960, off-course betting shops were legalized and, by 1963, 14,388 shops, most privately owned, had been opened. Betting-shop licenses reached a peak in 1968 at 15,782, declining thereafter to 13,254 in 1977, and 11,327 in 1983 (PP Gambling Statistics 1980, cited in Munting 1996). Sports-betting is one of the most popular forms of gambling in the United Kingdom. In the United States, on the other hand, sports wagering is illegal in all but two states. One of those states, Nevada, has 142 legal sports books that allow wagering on professional and amateur sports. Sports wagering reached US$2.3 billion in Nevada's legalized sports books in fiscal 1998. However, estimates of the scope of *illegal* sports gambling in the United States range anywhere from US$80 billion to US$380 billion annually (NGISC 1999b).

In summary, privatizing the gambling industry and introducing competition will increase market efficiency while satisfying consumer demand. Consumers will benefit from the elimination of government monopolies through increased competition and gambling service providers offering a greater diversity of quality products. Furthermore, by establishing itself exclusively as a regulatory regime, the government will alleviate public concern regarding the controversial role of government as regulator and beneficiary of gambling operations.

Individual freedom versus government paternalism

The overriding risk [of prohibition]—to both individuals and society—is that harsh government measures intended to control or suppress gambling will simply usher in a new era of public corruption, compromising the integrity of government officials, judges and the police. And for all of that, such measures would do next to nothing to deter truly compulsive gamblers from gambling.

Guy Calvert (1999b)

The most fundamental, yet most frequently overlooked, aspect of the gambling debate is: should one have the right to choose whether or not to gamble? The freedom to engage in gambling activities is not commonly associated with individual liberties (Moran 1998). Nevertheless, the extent to which a person has the ability to behave and spend money as he or she pleases is an important determination of a truly free society. In our opinion, even if a minority of people choose to engage in gambling activities, the individual right to freedom of choice should be respected. Those opposed to government-imposed restrictions on gambling believe that the State should not be in the business of either encouraging or discouraging gambling. If individuals choose to gamble, that is *their* choice. Furthermore, if individuals and private organizations identify a demand for gambling and desire to provide opportunities for gambling, that also should be *their* choice.

McGowan (1994) asserts that the controversy faced by public policy-makers involves a conflict between those who believe that the goal of public policy should be the public good versus those who advocate the supremacy of the rights of the individual. One of the major prohibitionist arguments surrounding gambling and individual freedom is that individuals are not always rational and, in some situations, cannot be trusted to deal with the consequences of their own actions. Therefore, they are not accountable for their actions when things go wrong. Hence, it is argued that it is in the public interest for the government to make decisions on behalf of those individuals who are considered to be irrational or at risk of becoming irrational. In our view, it is incumbent upon advocates of a free and civil society to resist this kind of government pa-

ternalism—unless, however, our society no longer deems it appropriate to argue, as the nineteenth century economist and philosopher John Stuart Mill declared, "Over himself, and over his own body and mind, the individual is sovereign."

A polarity of views is held by public officials regarding how the government should address the issue of problem gambling or if there is even a legitimate reason for denying or overriding "consumer sovereignty," the notion that consumers are the best judges of their own welfare. The evidence from four leading industrialized democracies is clear: most people who gamble do so willingly and rationally, and as a form of entertainment. In our view, therefore, the small number of people who are unable to control their gambling does not merit heavy-handed government intervention. Although there are socially harmful activities that require government intervention, gambling *should not* be considered one of those activities. Furthermore, those who become addicted to gambling rarely threaten the overall harmony of the community. As Moran succinctly stated, "It would be unreasonable to curtail the enjoyment that the vast majority obtain from the activity [gambling] because of a tiny minority" (1998: 2).

The fundamental issue is the extent to which the government has the right to limit individual freedom of choice. Although people enjoy gambling for many reasons, the most common characteristic shared by gamblers is the propensity for taking risks. Canadian philosopher Paul Russell asserts that risk-taking is an essential component of a capitalist society. According to Russell, "If you tried to take the risk out of life, the unpredictability, it would make it very boring for everybody " (quoted in Todd 2000). Gambling provides players with opportunities to play games of chance for money, taking risks that they would not otherwise have the opportunity to take in their everyday lives:

> Gambling is a combination of risk and ritual. Both components are main-stays of human society, for the very good reason they are part of our make up. It is no wonder, therefore, that gambling is universal. A coercive effort to eliminate or reduce gambling must compete against that most formidable opponent, human nature (Calvert 1999: 3).

However, many conceive that gambling is an irrational behaviour that participants have little power to control. A person may be considered irrational if he willingly engages in, and later regrets, activities that are harmful to him. Indeed, there are people who exhibit compulsive and self-destructive behaviour or have "addictive" personalities for a variety of products and activities such as cigarettes or gambling. Simply stated, individuals who have addictive personalities are more likely to become addicted while those who do not have addictive personalities may engage in similar activities and never become addicted. As McClearly and Chew amply demonstrate,

psychological risks are prevalent in a small number of individuals whose vulnerability to a variety of society's stimulants is best handled through treatment for biochemical imbalances, faulty reasoning, or inadequate means of coping with adversity rather than by banning every activity enjoyed by large numbers of low-risk people that might promote risky behaviour in a few (McClearly and Chew 1998: 13).

Miller and Schwartz (1998) argue that gambling is considered more acceptable in a society where discretionary income is relatively high; however, it is argued that people with little discretionary income or limited opportunities for increases in wealth require greater protection from gambling. We find it interesting that gambling conducted by affluent members of society is considered by many to be an affordable and reasonable form of entertainment. On the other hand, there is the widespread perception that gambling by the working-class members of society should be limited because it may distract them from their responsibilities to family and work. We suggest that the presumption that people who gamble and have a lower disposable income should be protected from themselves stands in opposition to the fundamental principles of a democratic and egalitarian society.

Contrast, for a moment, social attitudes toward gambling with that of alcohol. As Ronald A. Reno points out, "Abuse of alcohol, alone, is associated with all manner of disorderly behaviour. In 1996, alcohol was involved in 40.9 percent of road fatalities" and was a factor in 75 percent of cases of spousal violence (Reno). "Yet," writes Calvert, "we recognize that alcoholism is best addressed on a voluntary basis rather than through prohibition. Likewise, the best recourse for compulsive gamblers would appear to be counseling and abstinence, not government intervention to prohibit or otherwise limit gambling" (Calvert 1999b: 5).

The implications for policy-makers are clear. Prohibition of gambling is both unnecessary and unworkable: "Unsolicited attempts to exterminate gambling are unlikely to reduce the risks that gamblers are determined to assume anyway" (Calvert 1999b: 9). As problem and pathological gamblers will seek out opportunities to gamble even when it is difficult to do so, banning gambling is not the answer: "Such efforts may only succeed in increasing risk for others. To see how, it may help to consider analogous, and much studied, case history—the 1920–33 federal prohibition of alcohol" (Calvert 1999b: 9) and, we might add, the ongoing, and clearly unwinnable, "War on Drugs."

The political and popular momentum behind legalized gambling reflects an ongoing, and welcome, devolution in decision-making over the past 20 years. In practice, this has meant a devolution of choices to the individual citizen that used to be the exclusive domain of an elite group of social engineers. The fact that certain

individuals are harmed by engaging in gambling activities does not imply that no one should be allowed to gamble. As Dale Eisler insightfully commented: "The solution . . . is not limiting the freedom of others because of the problems of a few. The solution is helping those who suffer from compulsive gaming to recognize their problem and learn how to deal with it" (Eisler 1998). Gambling is about choice: people from all walks of life want to enjoy their freedom and that includes the right to do what they want with their own money. We trust that gambling prohibitionists will take note that, as Calvert reminds us, in addition to intruding on gamblers' liberties, prohibition makes a mockery of individual responsibility, which is hardly the best way to sustain the nation's moral health.

Glossary

Bet   An amount placed on the outcome of an uncertain future event, particularly pertaining to gaming. The amount spent on a particular form of gambling.

Bingo   A game of chance played for prizes, including monetary prizes, with cards bearing numbers or other designations that the card-holder covers when those numbers or designations are announced. A winner is determined when the first player covers a previously specified arrangement of numbers or designations on the cards.

British Casino Association   BCA is the trade association of the casino industry in Great Britain. All 16 licensed casinos are voluntary members of the Association. The Association itself does not participate in the actual operation of casinos, all of which are run by private or public companies; there are no state-run casinos in Britain.

Casino   A gambling facility that normally includes all or some of the following: slot machines, video games, card games, and other games such as keno, craps, and bingo.

Casino and Gaming Authority   An association responsible for the regulation of the industry in Australia. It does not determine gambling policy (e.g., whether or not there is to be a moratorium on EGMs or the introduction of Club Keno), which is entirely the province of government. Legislative amendments would be required if the Authority were to become involved in any policy-making procedures.

Chasing   The urgent need to keep gambling, often to win larger bets, or the taking of greater risks to make up for a loss or a series of losses.

Compulsive Gambling   The inability to resist the urge to gamble, often leading to damage of one's personal life, family, or job.

Daily numbers games   Game in which players choose their own three- or four-digit number. Often there are a variety of bets that can accompany these numbers, each with a different probability and payout.

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Double   A bet that predicts the outcome of two different races. To win, both parts of the bet have to be successful. If the first part of the bet is successful, then the winnings and stake are placed on the second horse. The bet is thus a multiplier bet, which can result in big winnings for a relatively small stake.

Drop   The amount of money exchanged for gambling chips in a casino, representing the gambler's expenditure.

Gambling   The lawful placement of a wager or bet on the outcome of an uncertain future event.

Gambling profit   The net income from provincial and territorial government–run lotteries, casinos, and VLTs, after deducting prizes and winnings, operating expenses including wages and salaries, payments to federal governments, and other overhead costs.

Gaming   All legal forms of gambling other than racing; e.g., lotteries, VLTs, casino gaming, pools, and minor pools.

Gross Revenue   The difference between the gross wager and the amount paid to winners is the gross revenue to the establishment, which equals the amount lost by players.

Gross Wagering   The total amount of money bet by the players (for racetracks, the gross wager is referred to as the "handle").

Gross Takings   the sum of all components of income before the payment of prize money and winnings is netted out. Net takings are gross income minus the payments of prize money and winnings.

Handle   The total amount wagered by the player, including money won on previous games.

Instant Games   A paper ticket with spaces that can be scratched off, revealing numbers or words that indicate whether the ticket is a winner or a loser.

Interprovincial Lottery Corporation (ICL)   A government body comprising the Ontario Lottery Corporation, the Western Canada Lottery Corporation, the British Columbia Lottery Corporation, the Atlantic Lottery Corporation, and Loto-Quebec.

Jai Alai   The smallest segment of pari-mutuel gaming, it involves players hurling a hard ball against a wall and catching it with curved baskets in a venue called a "fronton."

Keno   A game of chance where players pick numbers on a grid similar to lotto.

Lottery   A game of chance in which tokens, keys, or other objects are sold. Of these items, only one is the winner. The winner is usually selected randomly by a draw.

Lotto   Allows bettors to choose their own numbers by picking from a large set of possibilities. Drawings of winning numbers take place at regular intervals.

National Lottery Commission   The NLC (United Kingdom) is a non-departmental public body, which began on the 1 April 1999 to regulate the National Lottery, a task formerly carried out by the Office of the National Lottery (OFLOT).

Odds   The multipliers or prices that are offered by book-makers for the purposes of betting on races.

Off-track Betting   Pari-mutuel wagering conducted at a location other than the racecourse where the race is actually being held.

Pari-mutuel Systems   A form of gambling where the gambling establishment pools the bets of players and does not risk any of its own money. The winnings are taken from the pool of bets. The value of winnings is determined by the pattern of bets placed by the players.

Pathological Gambling   Addiction to gambling as defined in the DSM-IV, marked by the inability to stop gambling despite harmful effects to a person's personal life, job, or family. It is considered a treatable addiction.

Problem Gambling   Heavy gambling done by those who are not fully addicted to, but have experienced problems with, gambling.

Pull-Tabs   A game of chance in which the player pulls tabs on a card to match symbols to find out if he wins or loses.

Punter   Common British parlance for a person who bets with a bookmaker at race-tracks or in betting shops.

Round Robin   A bet on the outcome of three races, consisting of three single bets and bets resembling doubles and trebles. The overall stakes for a £1 round robin is £10 (plus tax). The Round Robin is a popular bet with betting-shop punters, as it provides the potential of a big win for a relatively small stake.

Racing   Usually defined in the gambling industry as horse and greyhound races and other specified contests covered by TABs.

Treble   A bet that predicts the outcome of three different races. To win, all three predictions have to be successful. If the first part of the bet succeeds, then the winnings and stake are placed on the second horse. If this is successful, then the enhanced stake and the winnings are placed on the third horse. The bet is thus a multiplier bet that can result in very big winnings for a relatively small stake.

Tote   The official pool-betting organization for the United Kingdom, which administers pools at racetracks around the country and has computer terminals for betting purposes in an increasing number of betting shops.

Turnover   Used to describe the amount wagered and bet on every game.

Video Keno   Requires bettors to choose a few numbers out of a larger group of numbers, with drawings held quite often, sometimes several times an hour. The payoff is a function of how many numbers the bettor chose, which corresponds to the probability of winning in each case.

VLTs   Video Lottery Terminals require a terminal that can be programmed to carry a variety of games, such as video poker. These games offer bettors a chance to play a game and receive immediate payouts for winning bets. These are also known as Electronic Gaming Machines or EGMs in Australia, Electronic Gaming Devices or EGDs in the United States, and Fruit Machines or amusement-with-prizes (AWP) machines in the United Kingdom.

Wager   A bet or an amount placed on the outcome of an uncertain future event pertaining to sport, mainly racing. The amount initially put on a particular gamble.

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