

# The Feasibility of Regulating Gambling on the Internet

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**Internet gambling presents substantial new challenges to governments and regulatory agencies. Existing approaches to betting, lotteries and gaming are limited by the nature of Internet technology, and the international nature of the activity. Particular aspects of Internet gambling are considered, and the conclusion is reached that prohibition is an ineffectual alternative, and that licensing of gambling services providers is the appropriate approach. Copyright © 2001 John Wiley & Sons, Ltd.**

## INTRODUCTION

Internet gambling is simultaneously the virtualization of an ancient activity and the generation of a substantial challenge to regulators. The medium of the Internet enhances accessibility of gambling by not confining the activity to a certain physical location or between certain times. Such accessibility enables gambling to transcend national and jurisdictional boundaries. The distributed nature of the Internet has led to a supra-jurisdictional problem for regulators who desire to control gambling activity. The technology of the Internet also promises actualization of two economic impacts on gambling phenomena. The first potential is a significant increase in returns on investment owing to lower overheads. While a resort casino may cost \$300 million to construct and require thousands of employees to operate, a virtual casino can operate with an initial investment of less than 1% of this amount and a similar proportion of staff (Janower, 1996). The second potential is the exacerbation of harmful social externalities owing to the lack of effective supervisory controls in cyberspace. This paper discusses the nature of

Internet gambling and assays various regulatory strategies through the lens of technical feasibility. The next section introduces the role of regulation in gambling generally, while the third section examines the virtualization of gambling through the Internet, focusing on differences between physical and on-line gambling. The fourth section assesses the technical feasibility of different regulatory strategies, and the fifth section concludes the paper.

## GAMBLING REGULATION

Legalized gambling has rapidly expanded on a worldwide basis and developed a major economic role in many communities. The underlying assumption of governments, however, has been that, despite the generation of employment and stimulation of the economy, unregulated gambling would inevitably create harmful social externalities, including underage and problem gamblers, and criminal activities attracted by the large revenues and high profits (Albanese, 1985; Kindt, 1994; Grinols and Omorov, 1996). For these reasons, gambling has been historically surrounded by a frequently complex regime of legislation and supervision. The intervention of governments can

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be characterized broadly as an attempt to manage the costs, benefits and profits of gambling for the overall benefit of the community. A result of this intervention is that activities in the gambling industries are driven not merely by market forces of supply and demand, but also by the granting, amending and revoking of legislative monopolies. The risk of regulatory agency capture (Sabatier, 1975; Freitag, 1983; Grabosky and Braithwaite, 1986) is likely to be high. Moreover, governments commonly capture a proportion of the superprofits arising from the monopoly, and become habituated to the revenue.

The United States provides an example of a federal system where jurisdiction presents particular problems for effective regulation. While the national government is responsible for the regulation of Native American gambling, gambling using telephonic services and aspects of the involvement of organized crime in gambling activities, such as money laundering, the United States bear principal responsibility for gambling regulation, with some delegation to local authorities. Australia follows a similar structure: the Commonwealth has powers to pass laws relating to telecommunications, but the state governments control most of the physical gambling activity, and the revenue. The result is lack of co-ordination and rivalrous competition for gambling revenue. Because of the revenue it raises, governments have an interest in allowing, gambling. Indeed, they are, in many cases, sponsors and promoters of some forms, such as lotteries. Individual states also have an interest in keeping wealth within their borders, and capturing the positive economic benefits of capital-intensive forms of gambling such as casinos. The manifestation of a competitive federalism is apparent in elements of the development of gambling, such as the riverboat casinos or sponsoring of casino-led tourism to remote capitals.

Gambling also provides regulatory challenges in being fragmented across several distinct activities, with different direct and indirect economic effects. Conventionally, gambling activities are analysed in three categories: betting (also referred to as wagering), lotteries and gaming.

Betting is frequently conducted on a pooled wager or pari-mutuel basis, and its popularity increased with access to 'off-track' betting facilities and simulcast of racing events. In Australia, many forms of betting are currently lawful, partic-

ularly in relation to racing, such as horse and greyhound. In the United States, on the other hand, sports betting is only legal in two states, Nevada and Oregon. The individual placing the bet is intended to have no control over the outcome (else the risk arises of moral hazard, such as 'taking a dive' in boxing) and is subject to either accepting or rejecting the odds on offer. Most regulation in the realm of betting relates to the licensing and location of the bookmakers and to the enforcement of the wager. Outright prohibition of all forms of betting is rare. Even idiosyncratic betting, such as who will win an Academy Award or which member of the British Royal Family will die next, can now be undertaken in the United Kingdom, as well as several other nations, including Australia.

In betting, the person placing the wager will be acting on some form of assessment of the odds (whether it is rational or emotional) and an implicit belief that their expected return on the bet is positive. The risk in wagering is based on uncertainty of outcome, which can be reduced by information acquisition through research, for example, animal bloodlines, recent performances or the physical state of the track. Lotteries and lottery-like activities differ from betting in that they are essentially games designed around artificial randomness. Lotteries are generally conducted by the government, by organizations licensed by government, or by charitable and church organizations with the sanction or acquiescence of governments (bingo, raffles, etc.). Regulation is intended to ensure that the element of chance is consistent, so much attention is paid to controlling the manner in which the numbers are to be selected or generated. Lotteries also generally have stringent controls imposed on them relating to the verification of the winner, such as data contained on magnetic strips and alphanumeric sequences covered with 'void if removed' notices.

Gaming is in many countries restricted to licensed premises, commonly referred to as casinos. The games available within a casino include some that have similar characteristics to lotteries (e.g. Keno, money wheels, roulette), together with others that involve actions by the player that can affect the outcome (e.g. blackjack, poker). The common element is that the rules and payoffs from the games are predetermined mathematically by the casino to ensure that, despite the strategy or ability of any individual gambler, the house

wins over the long run. Casino gambling couples negative expected return with positive variance. There appear to be two major objectives for casino regulation. One is to ensure that the games are conducted in such a manner that consumers have a real chance of winning. This involves government supervisors or 'inspectors' monitoring play to preclude unapproved actions, such as dealing from the bottom of the deck, 'fixing' roulette wheels and adjusting the rules or payoffs on an opportunistic basis. Another major objective is to address social externalities associated with gambling, particularly where these externalities involve criminal activities (Grinols *et al.*, 2000). One example is the prevention of involvement by organized crime for such purposes as money laundering or extortion.

## INTERNET GAMBLING

### The Virtualization of Gambling

During the last few decades, same-time-same-place gambling, such as at racetracks and at casinos, has gradually been added to by same-time-different-place activities. Telephone betting, in both legal and illegal forms, has become widespread. More recently, the provision of television broadcasts and simulcasts permitting gamblers to view the remote events on which they have been placing their bets have augmented this. Recent industry figures in the United States suggest that more than three-quarters of all bets on racing are placed off-track (National Gambling Impact Study Commission, 1999). In Australia, state government Totalizator Agency Boards (or TABs) have located themselves within licensed clubs with satellite television broadcasts of racing and other wagered events. One immediately apparent effect is that the cost of searching for gambling opportunities has fallen dramatically.

Since August 1995, when the first virtual casino commenced business, the Internet has witnessed an explosion in the number of gambling web-sites (Janower, 1996). This increase has been of such a degree that Internet gambling, along with sex services, appears to be one of the largest sources of revenue generation on the net (Australian Parliamentary Librarian, 1997). A study by Sinclair (1999) found that Internet gambling revenues were \$651 million in 1998, more than double the estimated \$300 million from 1997. Facilitating

such growth is the fact that the cost of entering the market as an Internet gambling provider as relatively small—costing as little as US\$135,000 (Flatt, 1998), and penetration of the Internet has broadened considerably, along with improved graphics and audio technologies. The result of such a boom is that the three types of gambling mentioned above—lotteries, betting (dominated by sports books) and casino gaming—now have firmly established Internet counterparts. Already, hybrid forms of these three types of gambling have emerged, such as gambling based on computer games tournaments in which the gambler is also a participant against other players for prizes funded from entrance fees. Despite common features with casino games, the competitive nature of these tournaments is the basis for such sites falling outside the scope of gambling regulation (Janower, 1996).

Beyond economies of scale and scope, the virtualization of gambling is likely to result in changes to society, generating new externalities, as well as exacerbating existing social problems. Internet gambling is also likely to change the pattern of social costs and benefits. If gambling on the Internet replaced physical casinos, for example, some of the social costs associated with the physical presence of gambling would be reduced, such as ancillary criminal activities (e.g. money laundering). On the other hand, some of the positive social benefits might also be lost, such as local employment opportunities and taxation revenue. One graphic image was presented by science fiction author John Brunner (1975), who in *The Shockwave Rider*, depicted a future where ubiquitous display-boards for gambling pools on an enormous range of events were widespread. Some of these effects are likely to flow from the differences between Internet gambling and more traditional forms of gambling, which are considered in the following sub-sections.

### Lack of Transparency of the Provider's Identity

In conventional gambling, a physical venue is needed, such as a racetrack, lottery agent or casino. This is located either by advertising or by word of mouth. Online gambling services, on the other hand, are commonly located by the use of search engines such as Lycos (<http://www.lycos.com/>) or by index sites such as Rolling Good Times (<http://www.rgtonline.com/>). Index

sites are an increasingly important means of reducing information search costs as the players face an increasing range of services on offer from providers. Once located, however, the problem of lack of transparency arises. An Internet site can be located anywhere in the world, and its Internet address is no indicator of the physical location of the server, its potential mirror sites, or its human operators. The legal regimes of the countries governing play are, therefore, not apparent to most players. For example, Casino Australia (<http://www.casinoaustralia.com/>) is an attractive site emblazoned with images of Sydney, koalas and the national flag, but has no other connection with Australia. The online casino is physically located in the Netherlands Antilles, and marketed by a Native American gambling corporation.

Sites such as Bingo Bugle (<http://www.bingobugle.com/>) help to overcome this lack of transparency by critiquing the services of sites and providing information on the regulatory arrangements to which the sites are subject, and warning of potential fraud. Many Internet casino operations are physically located offshore from the target customers, specifically in order to avoid legal accountability. There are serious risks that such an operator may conduct business in a manner that would be regarded as unfair in more heavily regulated jurisdictions, and that they or their employees may appropriate credit cards details or deposited funds. Given the ease of sophisticated web page design, it is very difficult to detect what assurances exist that an operator offers reliable services.

#### **Lack of Transparency of Service Security**

Physical gambling premises operating commercially typically have strict controls for the protection of both the player and the provider. These controls are both physical and logical. In casinos, for instance, typical physical controls include the regular rotation of croupiers and the presence of 'pit bosses', who observe both the croupiers and the gamblers and resolve minor incidents. Betting premises and casinos both employ cameras to observe both staff and players so as to prevent error, to detect theft (either by staff or players), to detect and deter cheating and to provide evidence in the event of any of those activities. Other physical controls include security guards on call and patrolling within and outside the establish-

ment. Logical controls are present in the form of verification of tickets for lotteries through alphanumeric 'void if removed' security tags and betting tickets. Government inspectors provide a further layer of controls and audit.

In the case of Internet gambling, physical controls are principally limited to securing the site of the server and checks on the employees of the firm. Logical controls relate to the integrity of the software that implements the service, the integrity of player data stored on the server and the integrity of data in transit between the client and the server. A real risk exists that software can be manipulated to cheat the online gambler (Arnovitz, 1992). Moreover, hackers may gain access to an online casino's internal systems, to increase payoffs in their favor, or to steal credit card and personal details from other customers (Janower, 1996).

Some sites specify their logical security, and also other information to reassure gamblers, such as their accounting firm, auditors, bankers, regulatory law and regulatory agency. Generally, however, there is a lack of information for consumers, and hence it would be reasonable to expect some resemblance to the operation of a lemons market in terms of voluntary disclosure by online operators (Akerlof, 1970).

#### **Lack of Security for Payments by Consumers**

In the physical world, payment arrangements include cash and cards. Particularly, in casinos, cash is commonly exchanged for tokens in an endeavor to reduce the risk of theft by visitors to the premises.

In online gambling, however, the limitations of current technology mean that the most common means of payment is by credit card authorization, with some use of bank transfers. Some sites insist upon the purchase of their own redeemable electronic tokens (e.g. <http://www.prizes.com/>), but such behavior is not widespread. To date, only a few sites facilitate the use of electronic cash. Consumers are, therefore, exposed to a variety of risks in relation to the funds that they make available to the gambling provider.

#### **Lack of Certainty Concerning Payments to Consumers**

The issues that more typically concern governments and players (especially owing to the

potential to gamble outside jurisdiction) are those of fairness and security for the players of the services. A critical concern is the confidence that amounts due to consumers will be paid out. Internet gambling operators generally offer credits to credit card accounts and bank transfers, but the consumer protections that exist in the context of conventional gambling are, in many cases, not available to the Internet gambler. Gambling organizations on the Internet can present both technical and legal obstacles to collection of winnings (Conway and Koehler, 2000).

Concerns also arise in relation to the security of credit card details both in transit and in storage. Many sites fail to warn players that they are embarking on an unsecured transaction and those that do commonly provide inadequate information about security and encryption (Clarke *et al.*, 1998).

A further issue is the lack of information provided to consumers in relation to foreign currency translations and taxation. Few Internet gambling providers directly advise that foreign currency translation (and its associated transaction costs) arise if the service is paid for using a foreign credit card account. Some sites warn that players should account for their receipts where revenue from gambling forms part of the person's taxable income. Although such warnings are not required in physical gambling premises in most jurisdictions, the fact that the bulk of transactions online are likely to be using foreign accounts increases the need for such warnings.

### **Gambler Identity**

The majority of conventional gambling is conducted anonymously, through the purchase of unidentified tickets or tokens, in return for cash. In some circumstances, eligibility authentication may be undertaken. Most commonly, this involves a person who appears to be young being asked for evidence of having attained the required minimum age. Compromise to anonymity has occurred in the case of account-betting, where some form of identity (or possibly pseudonym) is associated with the account.

In the case of Internet gambling, two factors are tending towards further compromises to anonymity. One is the prevalence of credit card transactions, with the presumption that the identi-

fier on the card is that of the gambler. The other factor is the desire for some means of precluding young people from participating in gambling. Adolescent gamblers are more likely than adults to become compulsive gamblers (Conway and Koehler, 2000). This is resulting in various schemes, almost all of which involve evidence of identity being required not only of young gamblers, but of all gamblers. Because credit cards are generally not issued to minors, they represent a convenient form of evidence. On the other hand, credit cards can be acquired fraudulently, they can be used without permission by the cardholder's children, they can be stolen, and credit card details can be acquired and used by another party without theft of the card itself.

## **STRATEGIES FOR THE REGULATION OF INTERNET GAMBLING**

### **The Target of Regulation**

Regulatory measures can be targeted at either or both of the providers and the consumers of gambling services. In the case of consumers, regulation is commonly implemented in respect of age, through prohibition of the participation of minors. Measures might also be contrived to prohibit problem gamblers or undischarged bankrupts from engaging in gambling. The chances of success these types of regulation are slim, however, because gathering evidence over the Internet that establishes such characteristics with confidence is difficult, if not impossible. Moreover, a significant, vociferous and technically capable proportion of the Internet-public is very interested in denying organizations the ability to identify the individuals with whom they deal.

It would appear that, as in the real world, gambling providers will be the primary target of regulation. The provision of gambling services might be banned outright, or controlled through a licensing scheme, such that illegality only arises in the event of gambling services being provided outside the terms of a license. The conditions attached to the license might include prohibition of involvement by individuals such as minors, problem gamblers (however they might be operationally defined), or specified individuals (such as those declared by an authority to be involved with organized crime).

### Prohibition

Absolute prohibition is a strategy used in some jurisdictions. Current proposals before the Congress in the *Internet Gambling Prohibition Act* (sponsored by Senator Kyl) seek to enforce an absolute ban on online gambling through broadening and clarifying the definitions in 18 USC §1084. These provisions, originally flowing from the *Wire Communications Act 1961*, prohibits the use of 'wire communication' for interstate or foreign placement of 'bets or wagers'. Similarly, several states in the United States have imposed absolute bans on Internet gambling. The enforcement of an outright ban, whether against providers or consumers, is fraught with technical difficulties. These add to the serious jurisdictional problems arising in relation to offshore gambling generally.

Regulatory measures to ban Internet gambling outright can be divided into 'hard' and 'soft' prevention. By 'soft' prevention is meant the deterrent effects of the fact of illegality and the credibility of regulators to be able to detect, investigate and prosecute illegal activity. The effectiveness of mere illegality as a deterrent has been examined on a number of occasions and found to be limited where individuals perceive that there is little risk of being detected and prosecuted. Individuals inclined to gamble online are likely to be, by nature, risk-takers, and hence, the potential reward would be likely to outweigh the risk of being detected and prosecuted. The risk is also mitigated by the perception that law enforcement agencies are under-educated in computing technology, and unwilling to expend valuable time investigating what could be perceived as offences relatively trivial by comparison with real-world crimes, and other Internet demons such as child pornography.

By 'hard' prevention is meant features of the Internet's architecture and processes that preclude online gambling. No such features exist and they would be difficult if not infeasible to develop. This is because of the manner in which the Internet switches data, combined with the processes by which Internet standards are determined. Analyses conducted in the context of pornography have concluded that attempts to block sites will be ineffective. Identifying senders of Internet messages, and publishers of web-pages, is seriously difficult. Internet traffic carries little or nothing in

the way of attributes of a party, other than their net-identification or Internet protocol (IP) address. IP addresses, moreover, are capable of being routed through other IP addresses, masking or 'spoofing' the point of origin. Each time one address is blocked, another could be used. This is not mere conjecture—the techniques required to spoof an IP address are both readily available on the Internet, and within the reach of reasonably competent users.

Another side to this problem is that of the activity required to block sites. Consumers would have to be forced to route their traffic through Internet service providers (ISPs) who would in turn have to be forced to use proxy servers that would filter out traffic to and from designated IP addresses. The effect on transmission speed of the entire network by forced proxying of Internet sites would be very substantial, and the hardware, software and operator time to perform blocking is likely to be prohibitively expensive. In any case, such a scheme could be readily circumvented by operators moving Internet address frequently. Identifying new or spoofed addresses is non-trivial in terms of time and effort, and is significantly more difficult to achieve than tracing a telephone call.

Further legal complications arise as blocking of access to Internet sites may represent unlawful censorship. Other attempts to impose heavy-handed controls over Internet materials have led to Constitutional challenges. For example, the US *Communications Decency Act 1996* was ruled to be offensive to free speech principles protected by the First Amendment in *Reno versus ACLU* 117 S Ct 2329 (1997), and a preliminary injunction has been issued against enforcement of the *Child Online Protection Act 1999* pending hearing of a similar challenge.

### Licensing and Jurisdictional Controls

Another possibility for regulation of the entities is licensing of online gambling. Unlike outright prohibition, reasonable regulation of gambling online should not offend US Constitutional principles given the commercial, rather than political, nature of the content. The US District Court has suggested in *Allendale Leasing, Inc. versus Stone* 614 F Supp 1440 (1985) and *Ziskis versus Kowalski* 726 F Supp 902 (1989) that the First Amendment does not protect purely commercial or gambling interests. Within-jurisdiction providers could be

subject to license and stringent information systems control and audit.

From a consumer protection perspective, licensing of operators locally may provide regulation in the form of quality assurance and reputation. Gamblers can be confident of operator fairness and solvency, and the availability of legal redress, if a government authority has screened the licensee, improving transparency. The price for the government's endorsement may usefully be tied to a taxation regime. In jurisdictions where physical gambling is already licensed, this may require the development of new forms of monitoring, especially of software and hardware.

The adoption of a licensing strategy would, however, demand significant enhancement to intelligence and law enforcement strategies. Even where provider and consumer are both within-jurisdiction, the virtualization of an enterprise's operations could necessitate new detection, investigation and evidentiary techniques, especially owing to the fact that Internet gambling operations are not necessarily dependent on a physical locus, and are not at all dependent on visitations by gambling consumers.

Internet gambling is, moreover, an international activity, and hence, gives rise to jurisdictional problems. The lawful behavior of licensed providers within jurisdiction does not ensure appropriate behavior by providers outside the jurisdiction but accessible to the jurisdiction's population. The regulation of extra-jurisdictional operations can be addressed through either a treaty or the establishment of multiple bi-lateral or multi-lateral agreements with other jurisdictions, not necessarily limited to a jurisdiction's geographic neighbors.

Much like taxation, however, Internet gambling has lent itself to the creation of gambling havens such as the Netherlands Antilles and the Commonwealth of Dominica. It remains to be seen whether these operations will suffer as consumer experience accumulates and consumers switch to providers who are more trustworthy, and whether the governments of such havens will impose some degree of regulation in order to retain the economic activity within their territories.

#### **Regulating Ancillary Activities**

Internet gambling involves a number of associated activities that a regulator might choose to exercise

control over. Collateral means of regulating gambling can be adopted in conjunction with regulation of gambling producers and consumers. One such measure would be to regulate the act of providing a service related to Internet gambling where the dominant purpose is demonstrably to support Internet gambling. An example of this would be either to criminalize or impose reporting requirements on establishing an account from which payments can be made and into which payouts could be deposited. Under the current payment and payout schemes, such regulation would prove difficult to police as Internet gambling services make use of mainstream funds management and funds transfer services, and an investigator would need to establish a linkage between the funds flow and an act of gambling.

Other collateral means of regulation could include regulating the act of promoting Internet gambling either via the Internet or by more traditional means of advertisement. This would reflect legislation currently in place, whereby the promotion of gambling is outlawed in itself (such as in Tennessee) or where casinos are allowed to advertise their eating and entertainment facilities, but not their gambling facilities. Promotion online in some cases involves the initiation of a large volume of Internet transactions. Although investigators might be able to detect the volume 'spikes', it would be difficult to attribute these spikes to Internet gambling transactions as opposed to other transactions. Moreover, the likelihood of spoofing or the use of similar masking techniques could render the identity of the source undiscoverable. Compared with conventional promotional activities, Internet advertising is less readily identifiable and controllable.

#### **CONCLUSIONS**

Internet protocols embody features that present a wide range of very substantial technical difficulties to the would-be regulator of Internet gambling. Although the nature of Internet technologies may exacerbate existing negative social externalities, absolute prohibition is neither a sensible nor a feasible option. It would appear to be more appropriate to permit Internet gambling in order to impose some controls. Regulatory agencies, and governments generally, need to ensure broad awareness of the Internet's potential

impacts; provide education and training for relevant executives, managers and operational staff, and commission studies of relevant aspects of Internet technology and operations, of gambling on the Internet, and of regulatory initiatives and outcomes in pioneering jurisdictions around the world. Addressing the challenges of unlicensed and extra-jurisdictional providers is a great deal more challenging—there is limited scope for effective unilateral initiatives, and regional multilateral initiatives may have only a modest effect. Even if laws can be rewritten to address virtual gambling activities, the intractability of the technical difficulties confronting hard forms of regulation, together with the international jurisdictional problems, are likely to remain insurmountable obstacles to strategies of prohibition. The appropriate approach is to license and control domestic online gambling providers.

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