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SCOTTISH EXECUTIVE

Research on the Social Impacts of Gambling



RESEARCH ON THE SOCIAL IMPACTS OF GAMBLING

FINAL REPORT

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with

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EXECUTIVE SUMMARY

1. This study was undertaken through a review of the international research evidence, as well as relevant British research, on the social impacts of gambling and casinos. It also analysed fresh data from the 1999 Prevalence Survey of gambling in Great Britain to investigate patterns of gambling behaviour in Scotland.

Research Limitations

2. Understanding of the social impacts of gambling is limited by a serious lack of high quality research. Many studies have produced inconclusive or contradictory results, which can exacerbate the controversy that surrounds gambling with an evidence base that is often not able to resolve the most contentious issues.
3. As a result both the negative as well as the positive effects of gambling, particularly casino gambling, tend to be overstated. Claims that casinos create significant wealth, new jobs and regenerate local economies; or that they create massive social problems through increases in problem gambling and crime tend to be exaggerated. The evidence base shows that casinos are neither as beneficial as supporters claim, nor as damaging as opponents fear.

Problem Gambling

4. Problem gambling is defined as behaviour that is out of control and that disrupts personal, family, financial and employment relations. It is linked to financial problems such as debt and bankruptcy, divorce, lost productivity, crime (such as theft and fraud), depression and suicide.
5. It is estimated that between 0.6% – 0.8% of the adult population in Britain are problem gamblers (between 275,000 and 370,000 people). The percentages of the population are similar for Scotland.

Risk Factors and Disadvantaged groups

6. Disadvantaged social groups who experience poverty, unemployment, dependence on welfare, and low levels of education and household income are most likely to suffer the adverse consequences of increased gambling. Within these groups, those who are male, single and under thirty five years of age are also more likely to be at risk from developing problems with their gambling. In addition, problem gamblers are more likely than non-problem players to have heavy and/or problematic consumption of drugs, alcohol and cigarettes.
7. Although individuals from these groups may not spend more money on gambling in absolute terms, they do spend a higher proportion of their incomes than wealthier players.

Availability

8. Availability and convenience are strongly associated with problem gambling. Electronic gaming machines (EGMs) that are located outside casinos and are widely dispersed throughout the community in bars, hotels and clubs can encourage impulsive gambling and are associated with the highest rates of problem gambling worldwide.
9. At the other end of the scale, casinos tend to require deliberate effort, in terms of planning and travelling to a venue, which discourages impulsive play. Convenience is therefore a crucial regulatory issue (particularly when combined with the absence of public awareness activities), which has implications for the location of casinos.

Casino Gambling

10. Currently, around 3% of the British adult population gamble in casinos, although this is likely to increase as the effects of the new legislation come into force. Of these, between 5% – 8% are considered problem gamblers (i.e. less than a quarter of one per cent of the population).
11. Casino patrons have higher levels of income and education than other gamblers, and while casinos are the most popular form of gambling for individuals from the highest social class, they are the least popular form for those from the lowest social class. Individuals on lower incomes and with lower levels of education are less likely to visit casinos than the general population, although when they do, they tend to experience more problems with their playing.
12. In Britain, there are two distinct groups who experience problems with casino gambling: single, retired males aged over forty, especially those who are of Chinese ethnicity, and single unemployed males under thirty. These individuals also have higher levels of tobacco and alcohol consumption than other players.

Casino Impacts

13. Research has found that proximity to casinos increases rates of problem gambling in the local population. Some studies have found that the location of a casino within 50 miles of an individual's home can double the prevalence of problem gambling, although other work also suggests that the provision of specialist problem gambling services and public health initiatives can militate against such increases.
14. Casinos do not appear to increase *per capita* crime, although *total* crime in a neighbourhood may increase. This seems to be an effect of population growth: casinos tend to attract large numbers of visitors to an area, and casino-jurisdictions can also experience population growth, increasing overall numbers of people in an area who can commit or fall victim to crime.

15. This effect appears to be concentrated on specific types of crime, such as burglary, and does not seem to affect violent crime and most street crimes. Fear of crime does not appear to increase in communities that introduce casinos, and may actually decrease due to the presence of casinos' own security measures and the development of run-down areas.

Types of Casinos

16. Casinos are distinguished by a range of factors, including size and geographical location, which can result in very different impacts. Large 'resort' casinos are often located away from major population centres and incorporate a range of leisure facilities which makes them attractive to tourists. In contrast, smaller casinos are often located in more urban or suburban environments and offer fewer facilities, with less potential for attracting tourists.
17. The social costs of casinos tend to be exported to the areas where the gamblers who play them live. This means that 'resort' and rural casinos tend to be associated with the lowest social costs relative to economic benefits, since the majority of their customers come from outwith the immediate area. However, urban or suburban casinos tend to draw large numbers of local residents to them, meaning that social costs remain within the community.

Long Term Impacts

18. Longitudinal studies from Australia, New Zealand and the U.S. have found that the prevalence of problem gambling has remained stable or declined over time despite the introduction of casinos and other forms of gambling. This has been attributed to the provision of public awareness campaigns and treatment services, as well as processes of adaptation whereby communities adjust to the presence of gambling around them.

Prevention and Treatment

19. The provision of public health information and specialised treatment services targeted towards 'at risk' groups can help to combat the potential negative effects of increased casino gambling.
20. Public health approaches that focus on the prevention of problem behaviour in the general population can save costs in the long term, since, across a range of behavioural disorders, severe problem gambling is one of the most difficult and expensive to treat.
21. Raising awareness is particularly important in Scotland. As the pre-2005 legislation has restricted gambling in this country for so long, many individuals are simply not aware of the risks gambling can pose, nor are they aware of the availability of services to treat it. For example, less than half of the population have ever heard of Gamblers Anonymous, and only one in five problem gamblers has ever sought help for their difficulties.

Casinos in Scotland

22. In Scotland, small casinos and those located in urban or suburban areas would have the greatest potential for negative social impacts, particularly if those areas are already characterised by high levels of social deprivation.
23. However, the real question is the extent to which any of the proposed casinos would draw on their local populations. At present, it is not possible to predict the extent to which these casinos might attract local residents who are at risk from developing gambling problems.
24. In addition, the steps taken by public authorities to prevent the development of gambling problems could have a significant effect on the eventual social impact of a casino. Given this, it is crucial that public authorities adopt a proactive approach to ensure that the appropriate resources to prevent and treat problem gambling are specifically targeted within the areas that might host or be proximate to casinos.

CHAPTER ONE THE CONTEXT AND BACKGROUND OF THE RESEARCH

1.1 In the past twenty years, Western nations have witnessed a massive expansion in commercial gambling. A gradual liberalisation of the once tight controls on the industry has led to increased availability, participation and expenditure, and the exponential growth of the industry itself. This growth has been particularly strong in jurisdictions where electronic gaming machines and large urban casinos have been widely introduced, for example, Canada, the United States, Australia, New Zealand and South Africa.

1.2 In most cases, the introduction of state lotteries preceded these developments. Relative to these countries, the U.K. has been a late developer, only introducing a National Lottery in 1994, and only last year introducing legislation that paves the way for more widespread expansion.

1.3 The 2005 Gambling Act, which will be fully implemented by 2007, will create the most dramatic reorganisation of the gambling climate the U.K. has ever experienced. Up until the new legislation, gambling in this country had been strictly regulated by the 1968 Act, which was designed to ‘satisfy’ but not stimulate existing demand, and involved restrictions on advertising, licensing and all forms of promotion.

1.4 However, the introduction of the National Lottery in 1994 effectively began a process of liberalisation, with the loosening of strictures on, for example, advertising and access, that came to be seen as inequitable by the rest of the gambling industry, which continued to operate under tight regulation. The new Act is the culmination of this process. As well as attempting to increase protection of the vulnerable and regulate Internet gambling, it also removes the principle of ‘unstimulated demand’ and allows for the development of large casinos, of which at least one, a regional casino, will possess large numbers of high stake, high jackpot electronic gambling machines.

1.5 These proposals were accompanied by widespread opposition from a range of sources, including political, religious and community groups, who criticised them on ethical and moral grounds. Segments of the British gambling industry itself were also critical, fearing the proposals would undermine their profitability by granting licenses for lucrative regional casinos to overseas competitors.

1.6 In heated debate over the costs and benefits of gambling, proponents emphasised the economic regeneration, while opponents emphasised the social costs – particularly in terms of increased problem gambling – that increased gambling is argued to bring. In most cases, the debate tended to be based on polarised opinions, based on ethical and/or religious convictions rather than factual evidence.

1.7 The controversy led to pre-legislative concerns over the potential negative impacts of increased casino gambling, such as increased problem gambling and crime, and saw initial proposals for the development of eight regional casinos scaled back to only one, albeit with the possibility for potential increases at a later date.

This has significant implications for policy, and at present, various authorities are attempting to assess the measure of ‘best social impact’ of the proposed developments. In effect, this involves weighing up the potential benefits of increased gambling, and especially casino gambling, against the potential social harms it may create.

1.8 It is to facilitate this process of evaluation that this report has undertaken a review of the international evidence base on the social impacts of gambling.

CHAPTER TWO AIMS, SCOPE AND METHODOLOGY OF THE CURRENT RESEARCH

Aims and Scope

2.1 The primary aims of this report are to provide a balanced, up-to-date assessment of the evidence base relating to the social impacts of gambling, and particularly casino gambling, both internationally and with specific reference to Scotland. This information will be used to help inform the process of consultation between the Scottish Executive and the Casino Advisory Panel.

2.2 The report covers issues such as:

- the international prevalence of rates of problem gambling,
- factors influencing the prevalence and incidence of problem gambling
- the social impacts of problem gambling, including crime rates and fear of crime, and financial problems, such as bankruptcy and debt
- casino-specific factors
- the relation of gambling to socio-demographic factors, such as social class, gender and ethnicity,
- and the implications of all of these for social exclusion.

2.3 It also outlines research on the nature and effectiveness of various policies that are designed to reduce or prevent any negative social costs that may be associated with gambling, and particularly with casino gambling.

General Research Issues

2.4 Although some data on the social impacts of gambling exists from an international perspective, the evidence base for the U.K., and particularly Scotland, is extremely thin. In addition, much of the available material is methodologically weak and open to interpretation. To tackle this problem, a range of data sources has been consulted to identify the most rigorous studies (see below). In addition, the authors have analysed new data to establish figures for gambling relating to Scotland from the British Gambling Prevalence Survey, which was conducted by the National Centre for Social Research (NatCen) in 1999.

2.5 This study was the first to examine the prevalence of gambling and problem gambling in Britain. Although it only analysed data at the British level, it has been possible to return to the raw data in the survey and re-analyse it for material relating to Scotland. This material is not publicly available, but the Scottish Centre for Social Research (ScotCen) is part of NatCen, and has access to it. This new analysis allows for the estimation of some figures for gambling relating to Scotland – though it should be emphasised that the size of the Scottish sub-sample (c.750 respondents) limits the scope of this work.

2.6 In addition, the evidence base from the international data has been combined with known demographic features of Scotland utilising data from the Index of

Multiple Deprivation and the 2001 Census in order to make some suggestions about the potential social impacts of casino development in Scotland.

2.7 Where information on casinos is not available, literature dealing with gambling in general has been utilised, where it is relevant, to outline trends and issues.

Methodology and Data Sources

2.8 In order to fulfil the requirements of the specification, a comprehensive review has been undertaken of the most up-to-date and relevant literature from a range of sources. They adopted a three-tiered approach to the review, analysing (1) international, (2) U.K., and (3) Scottish data.

These included:

2.9 **Peer reviewed articles** from specialist sources such as *The Journal of Gambling Studies*, *International Gambling Studies*, and the *Journal of Gambling Issues*. The following databases were also searched, to locate potentially relevant literature:

- Academic Search Premier
- ASSIA
- Bath Information and Data Services (BIDS)
- Blackwell-Synergy
- Cochrane Library
- CSA Social Services Abstracts
- EBSCO MegaFile Premier
- ProQuest 5000 International

2.10 **Commissioned reports** of large-scale studies into the impacts of gambling and the prevalence of problem gambling. This includes, for example, the landmark U.S. *National Gambling Impact Study Commission* review (1999) and the Australian Productivity Commission's *Australia's Gambling Industries* (1999). It also includes the New Zealand *Gaming Survey* (NZGS) (1998-1999) and the National Council's *Gambling in Canada* (1996). It also include reports on the prevalence rates of gambling and problem gambling in a range of jurisdictions, including the U.S., Canada, Australia, New Zealand, South Africa, Norway, Sweden and Great Britain.

2.11 **Policy documents and steering papers** such as the large-scale, *Review of Research on Aspects of Problem Gambling* conducted for the Responsibility in Gambling Trust (2004), and the DCMS *Gambling Review Report* (2001).

2.12 **Documents held in specialist online libraries** Various gambling-related organisations and government departments have websites which include searchable databases and/or libraries, or which detail gambling-related publications and reports. These include:

- Alberta Gaming Research Institute: <http://gaming.uleth.ca>
- Australian Gaming Council: www.austgamingcouncil.org.au
- eCOMMUNITY: International Journal of Mental Health and Addictions: www.pasinfo.net
- eGambling: The Electronic Journal of Gambling Issues: www.camh.net/egambling/
- Gemini Research: www.geminiresearch.com
- Institute for Problem Gambling: www.gamblingproblem.net
- Institute for Research on Pathological Gambling and Related Disorders: www.hms.harvard.edu/doa/institute/
- New Zealand Ministry of Health: www.moh.govt.nz
- North American Association of State and Provincial Lotteries, Gambling Studies: www.naspl.org/studies.html
- Ontario Problem Gambling Research Centre: www.gamblingresearch.org
- Oregon Department of Human Services: www.dhs.state.or.us/index.html
- Queensland Government, Responsible Gambling: www.responsiblegambling.qld.gov.au
- Responsible Gambling Council: www.responsiblegambling.org
- Responsibility in Gambling Trust: www.rigt.org.uk
- The WAGER (Weekly Addiction Gambling Education Report): www.thewager.org
- United Kingdom Department for Culture, Media and Sport: www.culture.gov.uk
- University of Calgary Addictive Behaviours Laboratory: www.addiction.ucalgary.ca/
- University of Nevada Las Vegas, Gaming Studies Research Center: <http://gaming.unlv.edu/>
- Victoria Gambling Research Panel: www.grp.vic.gov.au

2.13 **Material from gambling treatment agencies**, such as GamCare (in the U.K.), and the RCA Trust and Gamblers Anonymous (in Scotland).

2.14 **Data from the 1999 British Prevalence Study** As outlined above, fresh data from this study has been analysed to provide an overview of patterns of participation in gambling in Scotland.

2.15 **Scottish Index of Multiple Deprivation** This has provided an overview of the areas of greatest deprivation in Scotland which has been mapped on to what is known about the profile of problem gamblers from international research and the evidence from the Prevalence Study.

2.16 One of the report's authors, Gerda Reith, also has access to a substantial personal library on gambling-related subjects, containing 'grey literature' that is not available from mainstream outlets, such as unpublished reports, reviews and discussion papers. This has been drawn on extensively throughout the report.

2.17 The report has also utilised the knowledge base and expertise of specialist forums such as *Gambling Issues International*, an online discussion group and networking forum, which has 400 members from 17 countries, represented by

researchers, clinicians, educators and policy makers. During the course of the review, a query was placed on the discussion board, which led to an ongoing discussion and revealed many sources of new data.

CHAPTER THREE CURRENT ISSUES IN GAMBLING RESEARCH: MEASUREMENT AND PREVALENCE

3.1 Unfortunately, the evidence base that is needed to address many of the controversies surrounding the social impacts of gambling is, in many areas, lacking. Research into the impacts of gambling is still in its infancy, and is beset with problems.

3.2 Although some data on the social impacts of gambling exists from an international perspective, the evidence base for the U.K., and particularly Scotland, is extremely thin. In addition, much of the available material is methodologically weak and open to interpretation. Although some economic effects are calculable, the social impacts are less easy to quantify, and, to date many studies have produced inconclusive or contradictory results.

3.3 This can exacerbate the controversy that surrounds gambling, with an evidence base that is often not able to resolve the most contentious issues, and which can be interpreted differently by those who are broadly ‘for’ and those who are ‘against’ the expansion of gambling. For example, estimates of the prevalence rates of problem gambling tend to be interpreted differently by treatment providers and the gambling industry, with the former highlighting the highest estimates to support their case for funding, and the latter emphasising the lowest ones to deflect attention from the potential harms of their product.

3.4 At the end of a lengthy and exhaustive investigation of the literature, the U.S. National Research Council (NRC) concluded that the evidence base was so weak in many areas as to make conclusions difficult or impossible to make. It wrote that the study of the costs and benefits of gambling is “still in its infancy”, and criticised studies that “utilised methods so inadequate as to invalidate their conclusions”, the lack of “systematic data”, the substitution of “assumptions for missing data”, “haphazard” applications of estimations in many studies, and a general lack of identification of the actual costs and benefits to be studied in the first place (NRC 1999: 5-18).

3.5 Some of the problems with this research are summarised below.

To begin with, the large sample sizes that are required to produce robust results due to the relative rarity of problem gambling in the population has made survey research expensive, and as a result research that has used adequate sample sizes is rare. Because they are relatively easier to access, many studies have utilised problem gamblers in treatment. The use of such participants can skew results, as individuals in treatment have distinct characteristics, including more severe problems, and are not representative of problem gamblers in the general population. An additional problem with such types of recruitment, and indeed, with many studies of problem gamblers in general, is the lack of control groups, which makes comparisons difficult.

3.6 Many studies provide a static ‘snapshot’ of the effects of gambling, rather than tracking changes in its development over time. This is particularly important in

accounting for the ways that the impacts of gambling can be influenced by other factors, and can vary over time. In particular, the impacts of casinos need to be monitored through longitudinal surveys of a range of social and economic factors, with findings tested against control groups. In all but a minority of studies, this has not happened.

3.7 In addition, the study of gambling and problem gambling has been dominated by medical and psychological perspectives, which tend to focus on gambling as a mental health issue. Here, the focus is on ‘pathological’ or ‘problem’ gamblers as individuals with particular mental, personality or even physiological problems. This rather narrow focus tends to draw attention away from the wider effects of gambling on communities and societies as a whole. As such, studies of the impacts of gambling on particular social groups, its effects on communities and its relation to factors that involve wider social frameworks, such as socio-economic deprivation, have been relatively rare.

3.8 In gambling research as a whole, questions of causality are also an issue. Gambling problems often co-exist with other problems, such as substance abuse, mental health problems, and general criminality in relations that are described as ‘co-morbid’. In such a situation, disentangling the impacts of one condition or behaviour on the others is extremely difficult. Establishing causation is also fraught with problems, and most studies can do no more than point to possible associations between gambling and a range of adverse effects. The issue of whether gambling *causes* certain negative impacts, such as crime, divorce and suicide; is a *contributory factor*, or is merely *associated* with such conditions, which may well occur anyway, has created much controversy and has not been satisfactorily resolved.

3.9 As the NRC explained, “evaluating studies of conditions that co-occur with pathological gambling requires careful formulation of research questions, such as ‘Does gambling precede the onset of other disorders? Do certain disorders exacerbate pathological gambling? Is there a pattern of syndrome clustering?...’ Very few studies have addressed even one of those questions” (NRC 1999: 4-13).

3.10 Such methodological weaknesses are often used to justify the claim that it is not gambling itself that creates problems, but rather pre-existing problems in individuals that results in excessive behaviour. This argument, often proposed by industry, is that it is not so much the gambling product that creates problems, but rather individuals with other difficulties who are drawn to it, and who would manifest problematic behaviour whether or not gambling was available. Such a stance is summed up by one industry official, who said: “Do problem gamblers exist? I am yet to be convinced of this, however I fully acknowledge that there are people with problems who gamble” (Mr Windross, Managing Director, TAB; in PC 1999: 7.4).

3.11 This argument has implications for policy. If problem gambling is regarded as a rare behavioural and/or mental disorder, then only relatively small numbers of vulnerable individuals can be expected to be affected. The best approach could arguably be to simply target treatment towards this small group. If, on the other hand, problems are considered to lie within the product itself, then far greater

numbers of people are potentially at risk and policy might be better directed towards limiting the expansion of gambling facilities and/or educating the general public about the risks of harm.

3.12 The vast majority of gambling research demonstrates that the former scenario is not the case. Problem gambling is not generally regarded as a condition affecting a minority of disturbed individuals who would, in the absence of gambling, display other forms of problematic behaviour. Rather, it finds that gambling problems are created by a range of complex associations between individuals, their environment and the gambling opportunities that they are exposed to.

3.13 As a result of these polarised debates, both the negative as well as the positive effects of gambling, particularly casino gambling, tend to be overstated. Claims that casinos create significant wealth, new jobs and regenerate local economies are often exaggerated (PC 1999; NGISC 1999; Goodman 1995; Grinols 1995). On the other hand, claims that they create massive social problems through increases in problem gambling and crime tend to be equally exaggerated. In fact, it is probably the case that a diligent researcher could select a range of studies to present quite a convincing case either for or against casino expansion. The reality, as usual, is more mundane: overall, the evidence base shows that casinos are neither as economically beneficial as supporters claim, nor as socially damaging as opponents fear.

3.14 A recent symposium on ‘The socio-economic impact of gambling’ held in Canada in 2003, summed up these problems, and is worth quoting at length:

“Both proponents and critics of state-sanctioned gambling are adamantly committed to their perspectives and each revels in citing the most recent research that appears to support their position. On the basis of this nominal evidence, each group seeks to lobby governments to make gambling-related public policy decisions that are in keeping with their world views.... However, while some of this gambling cost-benefit research is scientifically rigorous, much of it is of dubious quality; in many instances because it has been conducted by proponents or opponents seeking to promote their particular agenda. When the end justifies the means, scientific research suffers.... This circumstance creates a classic policy dilemma for governments; that is, on the basis of purported evidence, largely promoted by those special interest groups, is gambling (a) net beneficial to society, and therefore worthy of continued government policy support, including expansion, or (b) net-costly to society, suggesting that policies to curtail and even significantly decrease legal gambling opportunities are more appropriate?” (Wynne and Shaffer 2003: 112-3).

3.15 However, despite the problems noted here, a core of rigorous research does exist, and has provided some evidence of the social impacts of gambling. It has been utilised throughout this report. In particular, two landmark, large-scale surveys from America and Australia have reviewed a huge amount of published research, as well

as conducting new research of their own into the causes, impacts and policy implications of problem gambling. In America, the National Gambling Impact Study Commission (NGISC) was established to review the state of gambling in that country. It commissioned an analysis of professional literature by the National Research Council (NRC), and initiated new research by the National Opinion Research Centre (NORC) at the University of Chicago.

3.16 In Australia, a Productivity Commission (PC) was established to investigate the state of gambling in that nation. It conducted new research into all aspects of gambling and problem gambling, conducted an exhaustive review of international studies, and produced the report, *Australia's Gambling Industries* (1999).

3.17 Both reports were aware of the methodological, and other, problems relating to gambling research, and so, informed by this, their conclusions and recommendations were cautious, balanced and rigorous. It is generally considered that they represent the most authoritative statements on the impacts of gambling and problem gambling to date.

Definitions and Measurement of Problem Gambling

3.18 Gambling is a broad concept that includes a range of different activities, including betting on races and gambling machines, gambling in bingo halls, amusement arcades and casinos, as well as playing the lottery and on the Internet. For the vast majority of players, gambling is an enjoyable form of leisure, pursued for a range of reasons – to relax, to socialise, to experience some excitement, and perhaps to win money. For these individuals, gambling losses are simply the price of the entertainment, in much the same way as cinema or football tickets are the cost of a good time.

3.19 However, for a minority gambling losses are uncontrolled and often represent a desperate attempt to win back money rather than to enjoy a game. For these individuals, problem gambling consists of behaviour that is out of control and that disrupts personal, family and employment relations. It can also initiate a spiral of related problems from debt and bankruptcy, to criminal activity, domestic violence, familial breakdown and suicide.

3.20 A substantial amount of research into the causes of such behaviour has been conducted internationally. Although there is considerable disagreement over the exact nature of the relationships and causes of the disorder, in general experts agree that it involves some degree of failure to control impulses to act on the spur of the moment, and is often tied in with a misunderstanding of how games work and with faulty perceptions that they can be controlled. Failure to keep track of the amount of time and money spent gambling and efforts to 'win back' losses, are also predictors of problems. These characteristics have implications for the formation of responsible gambling policies, discussed in Chapter Six.

3.21 The terms used to describe problem gambling are derived from largely psychiatric attempts to classify and measure the behaviour, meaning that discussions

of such behaviour tend to be based on the assumption that problem gambling is a clinical psychological disorder.

3.22 The term ‘pathological gambling’ was first included in the third edition of the Diagnostic and Statistical Manual (DSM-III) of the American Psychiatric Association (1980), where it was described as an impulse control disorder – a compulsion characterized by an inability to resist overwhelming and irrational drives. Other impulse control disorders include, for example, kleptomania and pyromania. Focus soon shifted to its supposedly addictive characteristics however, and subsequent editions of the manual saw it reclassified in terms similar to those for psychoactive substance dependency with the term ‘pathological gambling’ consistently used to reflect its chronic, progressive character (APA 1987, 1994).

3.23 The criteria used to define it derive from three broad conceptual themes often associated with ‘addictions’ to substances such as drugs and alcohol, namely, compulsion or craving, loss of control, and continuing the behaviour despite adverse consequences. Although, technically, pathological gambling is defined here as an impulse control disorder, many clinicians and commentators consider it an addiction, akin to disorders associated with drug and alcohol dependency.

3.24 Around the same time as these debates were going on, another screen – the South Oaks Gambling Screen (SOGS) – was developed and became widely used for the measurement of gambling problems (Lesieur and Blume 1987). Although it is widely used, many criticisms have been levelled at the SOGS, the most significant being that it was designed to test individuals for psychological problems in clinical settings, not for general populations, and also that it tends to produce many ‘false positives’: i.e. that it tends to over-estimate the numbers of problem gamblers in surveys of the general population.

3.25 In both the SOGS and the DSM-IV, a positive response to five or more questions results in a classification of ‘probable pathological gambler’; less than five classifies a ‘problem gambler’.

3.26 Since the introduction of these two screens, over twenty others have been developed for a range of purposes, including screening, diagnosis, population monitoring and treatment planning. In general, they define pathological and problem gambling as behaviour that is out of control, and that has come to disrupt personal, family, social and vocational life, with the former regarded as a more severe condition than the latter. In reality however, the terms are often used interchangeably and, moreover, it can be difficult to distinguish between them since pathological gamblers will undoubtedly have been problem players at some point, and both types of players can experience fluctuations in the severity of their condition.

3.27 More recently, a public health approach has attempted to simplify these various categories into a more streamlined diagnostic framework. Rather than defining problem or pathological gamblers as a discrete group, with qualitatively different characteristics from ‘normal’ or recreational gamblers, this approach proposes a system that measures gambling behaviour along a continuum with less severe problems at one end, ‘pathological gambling’ at the other, and a variety of

states of more or less severity in between. (Shaffer and Hall 2001). From this perspective, problem gamblers, as well as individuals who score even lower on problem gambling screens ('at-risk gamblers') are of concern because they represent much larger proportions of the population than pathological gamblers, and because their difficulties may become more severe over time.

3.28 Somewhat ironically, the definition and measurement of the extent of problem gambling in a population can itself be problematic. The terms used to describe problem gambling are derived from the different screening instruments outlined above, and the lack of a single, standard screen can make comparisons between studies and over time difficult. Also, prevalence rates can be measured in one of two ways: by counting those who meet the criteria for problem or pathological gambling only in the past twelve months ("past year gamblers"), or by including all those who have ever fulfilled the criteria ("lifetime gamblers"). There are problems with both approaches, as "lifetime" measures may overestimate the problem, while "past year" measures may underestimate it.

3.29 It is worth pointing out here that, despite the emphasis on psychiatric characteristics, it could well be more useful to adopt a more pragmatic definition of problem gambling. Quite simply, for many gamblers, 'problem' behaviour can be defined in more straightforward economic terms as playing that they can no longer afford. When considering the correlations of problem gambling with social deprivation, which, it should be noted, most international studies fail to do, this simple but crucial feature needs to be borne in mind.

The Prevalence of Problem Gambling

3.30 The lack of a standard, universal criterion leads to difficulties in estimating the extent of problem gambling. However, despite this, many jurisdictions have made efforts to measure levels of problem gambling in their populations, and these surveys have produced relatively similar rates. Most western nations with developed gambling industries report rates of problem gambling between 0.6 and 3%.

3.30 A summary of international rates, based on past year prevalence, is provided in Table 3.1. It can be seen that Britain currently has relatively low rates of problem gambling, compared with those of other jurisdictions.

3.31 Although it is clear from this that numbers of problem gamblers are relatively small, they nevertheless account for a large proportion of gambling expenditure (i.e. losses). Some studies have shown that between a third and a half of casino profits come from this group (Lesieur 1998, Volverg 2001) while others have demonstrated they account for a third of the entire gambling industry's market (PC 1999).

Table 3.1. International Past Year Gambling Prevalence Estimates

	Problem gambling (%)	Pathological gambling (%)
SOGS		
New Zealand	0.8	0.5
Sweden	1.4	0.6
Britain	--	0.8
Switzerland	2.2	0.8
Australia	2.8	2.1
South Africa	--	1.4
Norway	0.5	0.2
DSM-IV		
Britain	--	0.6
Hong Kong [lifetime]	4.0	1.9
Meta Analysis		
United States and Canada	2.5	1.5

Source: Shaffer et al. 2004

Problem Gambling Prevalence in Britain and Scotland

3.32 In 1999, the National Centre for Social Research (NatCen) conducted the first prevalence survey for Great Britain. The British Gambling Prevalence Survey utilized both screens¹ to determine the prevalence of those who had experienced problems in the past year. The DSM-IV put the figure at 0.6%, or 275,000 people, while the SOGS estimated it to be 0.8%, or 370,000 people. Rates for Scotland were 0.7% and 1%, although numbers were not large enough to be statistically significant. As a point of comparison, the estimated number of problem drug users in this country is 270,000 (Frisher et al 2001).

3.33 Consistent with the demographic profile of problem gamblers in other countries, the British survey provided a profile of a problem player who was male, aged 35 or under, had parents with gambling problems and was on a low income. Problem behaviour was also associated with starting gambling at an early age and being separated or divorced. Numbers of casino gamblers in the survey were too small to determine the profile of problem players, although other studies have done this and this is discussed in the next chapter.

¹ For the SOGS scores, the British survey used a cut off of 5 positive responses to determine 'problem' rather than 'pathological' gambling, in line with many other recent studies. It used a cut off of 3 for the DSM-IV scores to determine problem gambling, but for purposes of clarity did not incorporate the additional cut off of 5 or more to determine pathological gambling (Orford et al 2003: 158). Because of this, and in order to allow straightforward comparison with other countries, the results of both screens have been listed under the 'pathological' gambling heading in the Table. In a move which makes the measurement and comparison of gambling problems ever more complex, many countries now use a score of 5 to diagnose problem rather than specifically pathological gambling. Hence, it is the figures in the 'pathological gambling' column which should be looked at most closely in this table.

3.34 The survey found a significant correlation of problem gambling with household income, with those in the lowest income categories nearly three times as likely to be defined as a problem gambler. Prevalence amongst men was found to be two to three times higher than amongst women. Problem gambling was also inversely correlated with age, decreasing as age increased, although this relationship was clearer for men than for women. Young men, defined as those less than 35 years in the case of the SOGS and less than 25 years in the case of DSM-IV were, therefore, the group with the highest prevalence of problem gambling. Single people were more likely to be problem gamblers than married people, although as the authors point out, this is likely to be a function of age (single people tend to be younger) than marital status *per se*.

3.35 Problem behaviour was also associated with having parents who gambled and starting gambling at an early age.

CHAPTER FOUR FACTORS INFLUENCING THE PREVALENCE AND INCIDENCE OF PROBLEM GAMBLING

4.1 Various factors have been found to influence the distribution of gambling problems, and these have been examined through studies of the incidence and prevalence of problem gambling rates. Prevalence refers to the proportion of people within the population suffering from a disorder at one point in time, while incidence refers to the proportion of people who acquire the disorder during a specific period. Prevalence is usually assessed using cross-sectional methods, such as surveys.

4.2 Assessing incidence requires longitudinal approaches involving panel or cohort studies and much longer time frames (Abbott & Volberg 1999). Studies of incidence can be useful in helping to determine the impacts of particular forms of gambling on groups who are newly exposed to it. A number of such studies have been carried out in North America, Australia and New Zealand, and indicate two main factors that contribute to the development of problem gambling, namely the structural characteristics of games themselves, and the availability of gambling.

Type of Game and Availability

4.3 Certain features of games are strongly associated with problem gambling. These include games that have a high event frequency (i.e. that are fast and allow for continual staking), that involve an element of skill or perceived skill, and that create 'near misses' (i.e. the illusion of having almost won). Size of jackpot and stakes, probability of winning (or perceived probability of winning), and the possibility of using credit to play are also associated with higher levels of problematic play. Games that meet these criteria are electronic gaming machines and casino table games.

4.4 The British Gambling Prevalence Survey found that casino games were associated with the highest rates of problem gambling in their sample, with a rate of 8.7% amongst those who had played in the past year. If activity was broken down by weekly activity, the figures were even higher, at 34.5%. However, only around 3% of the population actually participate in casino gambling, and the researchers emphasised that the relatively small numbers involved meant that this latter figure should be interpreted with caution. As a point of comparison, the next highest rates of problem gambling were found on betting with a bookmaker (8.1%), followed by betting on dog races (7.2%). Gambling machines were associated with a problem prevalence rate of 3.4%, although when playing on weekly basis was considered (which the researchers considered more accurate), the rate was 6.3%.

4.5 An earlier British study also found particularly high rates of problem gambling associated with casinos. The survey, the largest of its kind, interviewed over a thousand patrons of forty casinos and classified 2.2% of respondents as 'severe' problem gamblers and 5.2% as problem gamblers (Fisher 1996, 2000). It has been pointed out that these rates are likely to be an underestimate, as the researcher adjusted the figures downwards to take into account the frequency which

respondents reported they visited casinos². Not taking this into account, the figures would be 7.7% for severe problem gamblers and 8.6% for problem gamblers.

4.6 In addition, the research demonstrated that visitors to casinos were made up of a small core of regulars (i.e. who visited at least once a week), who had higher rates of gambling problems, and a much larger group of less frequent visitors. Although the regulars made up only 7% of casino-goers, they accounted for 63% of the visits, and had high rates of problem gambling: 7% were classed as 'severe' problem gamblers, and 7% as 'problem gamblers', compared with 2% and 5% of the less regular players.

4.7 The study also found that regular visitors constituted a slightly different demographic group from visitors in general. Males, those aged over 40, people retired from work, those separated from their partners and people of non-white ethnicity were all more likely to be regular visitors. A highly significant finding was that problem players were three times more likely than non-problem players to be of Chinese ethnicity. Severe problem gamblers were also twice as likely to smoke as others, and twice as many had worried about their levels of alcohol consumption.

4.8 The author concluded that casino players appeared to be made up of a small core of regular players, who were demographically distinct from the population as a whole, and who possessed particularly high rates of problem gambling. However, problem gamblers who were *not* regular visitors to casinos tended to be younger (30 years of age or younger), single and unemployed. This suggests that there are two distinct groups who experience problems with casino gambling. One is young, single unemployed males whose primary form or forms of gambling are outwith the casino but who, as it were, 'bring their problems in' with them when they visit. The other is an older group of retired males who are also single and whose problematic behaviour may be predominantly confined to casinos. This latter group are also much more likely than non-problem players to be of Chinese ethnicity.

4.9 Britain is slightly unusual in its distribution of problem gambling, since almost every other country worldwide reports that the highest rates are associated with electronic gambling machines (EGMs), where prevalence can be as high as 25% (Abbott & Volberg 2000; PC 1999). These rates are particularly associated with machines that are located outwith casinos, i.e. dispersed in convenient locations such as arcades, bars, and clubs and so on. This 'convenience' gambling (or 'ambient' gambling as it was named by the Budd Committee), is the kind that is most associated with impulsive and habitual play, and is of greatest concern to policy-makers and treatment providers alike.

4.10 This is most apparent in Australia, where EGMs or 'pokies' were introduced in large numbers in New South Wales and Victoria in the 1990s, and are now widely dispersed in a range of locations throughout communities. This form of gambling is by far the most problematic in that country. They are particularly concentrated in low income areas, and easily accessible through their wide dispersal

² i. e.: the heaviest gamblers would be more likely to be regular attendees and so more likely to be available for interview, possibly skewing the overall results

in local neighbourhood venues. The distribution of EGMs is largely responsible for the different rates of problem gambling throughout Australia.

4.11 For example, in Western Australia, EGMs are banned outwith the state's one regional casino, and as a consequence, the ratio of machines per 1000 adults is 0.9. In contrast, in Victoria, large numbers of EGMs are widely dispersed, and the ratio of machines to adults is 8.1. These differences are reflected in rates of problem gambling: Western Australia has one of the lowest in the country, at 0.7%, while Victoria one of the highest, at 2.14%. In Victoria, nearly 90% of problem gamblers receiving counselling state EGMs as their main problem; in Western Australia, the number is 18%. New South Wales, which has the greatest density of machines in the country overall, also has the highest rate of problem gambling: 2.55%³ (SA Centre for Economic Studies 2005). In other words, it is not only the type of game, but also its availability that combine to create problems in the Australian case.

4.12 It has been suggested that these types of electronic machines tend to displace other forms of gambling in terms not only of overall expenditure, but also of share of problem playing. As one researcher put it, the great majority of problem gamblers who appear in both community surveys and treatment settings worldwide report having problems exclusively or primarily with gaming machines (Abbott, 2001). EGMs are the fastest growing and most profitable sector of gambling markets: between 70 and 80% of revenues come from them (Abbott 1999).

4.13 In addition, they have wide appeal. They are popular with young people, already familiar with computer video games; with women, who can be uncomfortable with more traditional casino table games; and with a range of more traditional bettors, who may use them to fill in time between games at, for example racetracks or in betting shops. Internationally, it has been found that where such machines proliferate, the distinctions between male and female rates of problem gambling have tended to decline, in a 'feminisation' of problematic behaviour.

4.14 The rates of individuals presenting for treatment can also be taken as an indication of the association between particular forms of gambling and problem behaviour. The great majority of individuals calling gambling telephone helplines and presenting for treatment report that their problems are primarily with electronic gaming machines, track betting and casino table games. In the last ten years, increased expenditure on non-casino gaming machines has been accompanied by increases in the proportion of people contacting helplines who cited this as their major form of gambling throughout Australia, New Zealand and a number of other countries (Paton-Simpson et al. 2004; PC 1999)⁴.

4.15 Similarly in the U.K., reports of problem gambling are most often associated with electronic machines. Over one third of calls to the national gambling helpline,

³ New South Wales has almost 103,000 machines in total, of which only 1500 are located in casinos. Victoria has almost 30,000; of which 2500 are in casinos. Western Australia has under 1500 in total, all located in its casino (SA Centre for Economic Studies 2005).

⁴ In Australia, EGMs are associated with 65-80% of all problem gamblers receiving counselling, and in New Zealand, 90% of new counselling clients report non casino EGMs as their primary problem (Productivity Commission 1999; Abbott 2001).

GamCare, and over half of counselling sessions, are predominantly related to them (GamCare 2003). In the past two years, problems associated with a new form of betting machine – Fixed Odds Betting Terminals (FOBTs) – a kind of remote ‘electronic roulette’ – have increased dramatically. A recent, unpublished survey by Mintel for the Association of British Bookmakers has revealed dramatic increases in the use of FOBTs by problem gamblers (Europe Economics-Mintel 2006). The research examined patterns of gambling participation amongst betting shop visitors, and found that, between 2004 – 2005, the use of FOBTs among problem gamblers had escalated from 12% to 40%. Given that new casinos in Britain, and especially Regional developments, will have relatively large numbers of EGMs, including FOBTs, this is a trend which should be watched closely.

4.16 The Australian case provides clear evidence of the link between the availability of certain types of gambling, and problem gambling. This relationship will be explored further in the remainder of this section, when surveys of the impacts of the availability of various forms of gambling on problematic behaviour are examined.

4.17 However, it should be pointed out here that availability is not simply a matter of the number of gambling outlets in a particular area. A range of other factors are involved. Some of these include ease of access, such as opening hours, restrictions on entry, public transport and/or private parking facilities, and general location. Such features can make a visit to a venue relatively time consuming and something which must be planned – such as a trip to an out of town casino – or they may make it very easy, such as dropping coins in a machine in a bar.

4.18 Among the major forms of gambling, gambling machines and lotteries are most accessible, in that they are widely dispersed in a range of locations which people may pass by in the course of their everyday activities. Casinos are least accessible, in that many are situated in areas which individuals must travel to using some form of transport, whether in out of town locations (as is common internationally) or in urban centres (as is most often the case in the UK).

4.19 The more time and effort is required to enable an individual to gamble – e.g. in terms of planning and actually getting to a venue – the less likely they are to gamble on impulse. Conversely, the less time and effort is required, the more likely they are to gamble impulsively – and to continue to do so. Convenience is therefore a crucial regulatory issue (particularly when combined with the absence of public awareness activities), and this has implications for the location of casinos.

Availability

4.20 Given the association between high levels of involvement with particular forms of gambling and problem gambling it could be expected that the substantial increases in gambling availability and expenditure that occurred in many parts of the world since the mid-1980s will have generated significant increases in problem gambling prevalence. This has been examined through surveys of the incidence and prevalence of problem gambling in the general population, most of which have been conducted in the United States, Canada and New Zealand.

4.21 Many studies show a positive relationship between increased availability of gambling – especially casino and electronic machine gambling – and problem behaviour. However, closer analysis of some of these results shows that the relationship is not straightforward, nor is it linear. Correlation does not always establish causation, and more sophisticated research is needed in order to tease out relationships and allow stronger causal inferences to be made.

4.22 Studies that have examined the incidence and prevalence of gambling problems, particularly in respect to casino development, are considered next, from paragraph 4.23. Where the material is available, the content of some of the studies considered in this section is covered in some detail. Although it could be presented in more ‘summary’ fashion, it is felt that the complexity of the issues involved, and the controversy that exists over some of the fine points of interpretation, merit such attention. However, a summary paragraph is also provided at 4.96 for readers who wish to skip this level of analysis.

4.23 A meta-analysis of a number of North American state and provincial surveys of gambling prevalence that had been carried out between 1975 and 1996, found a significant increase in the prevalence of problem gambling over time in the general population. While past year prevalence rates for surveys conducted prior to 1993 averaged 0.8%, rates for post 1993 surveys averaged 1.3%. During this period gambling availability had increased substantially (Shaffer et al 1997). Although statistically significant, the authors noted that the total variability in prevalence explained by time was relatively modest and that it has yet to be determined what other factors explain changing rates over time (Shaffer et al 1997, 1999).

4.24 Similar trends have been reported in other research. For example, various studies have found that Nevada has problem gambling rates between two and three times the national average (Volberg, 2002). More recently, Shaffer et al (2004) examined prevalence rates from counties within Nevada and found that the four counties with the greatest access to casinos had the highest problem gambling rates and the four with the least availability had the lowest rates.

4.25 A study of prevalence rates among five U.S. states with varying gambling histories and gambling accessibility showed that those with a longer history of legally available gambling had higher rates (Volberg 1994). In states where legal gambling had been available less than ten years, less than 0.5% of the adult population were classified as pathological gamblers; in states where it had been available for over twenty years however, the figure was 1.5%.

4.26 A number of studies have found correlations between gambling availability and branches of Gamblers Anonymous. Lester (1994) found significant relationship between the numbers of legally available forms of gambling and branches of GA, from states such as New York and Nevada, which have many forms of gambling and branches of GA, to Arizona and Utah, which have few of either. In Australia, the Productivity Commission found ten times the number of GA branches in New South Wales, which has high levels of gambling expenditure, than in Western Australia, which has low ones.

4.27 Although this correlation between service provision and gambling availability is likely to be an indicator of problem gambling prevalence, it should also be noted that it is also a policy intervention to treat problem gambling, as well as an indicator of increased awareness of problem gambling in the population.

4.28 Some studies have not found these relationships between availability and increased problem gambling. For example, Canadian studies from Alberta, Manitoba, New Brunswick and Nova Scotia have not reported increased rates of problem gambling, despite increases in gambling availability (Alberta Alcohol and Drug Abuse Commission 1998; Criterion Research 1995, Baseline Research 1996; 1996a). Studies from South Dakota and Minnesota also found no significant changes (Volberg and Stufen 1994; Emerson et al 1994).

4.29 In general, despite variability in findings, and a general paucity of research, the National Research Council concluded overall that: “the changes observed in [these] studies was consistent with the view that increased opportunity to gamble results in more pathological and problem gambling” (1999: 84). Most researchers worldwide concur with this opinion.

Casino Availability

4.30 This section will review studies of the availability of casinos on rates of problem gambling. First however, it should be noted that casinos are not homogenous, but are rather distinguished by a range of factors, including, crucially size and geographical location, which can result in very different impacts.

4.31 To begin with, casinos can vary greatly in size, from small enterprises with limited facilities, to enormous destination casinos, offering an entire leisure experience. In addition, they are built in a range of locations, and this ‘locational structure’ is important in determining overall social impacts. Bill Eadington, Professor of Economics and Director of the Institute for the Study of Gambling and Commercial Gaming at the University of Nevada, argues that casinos can be divided into the following categories:

- Resort or destination casinos: located away from population centres (such as the Gold Coast, Queensland, and Biloxi, Mississippi)
- Rural casinos: located away from population centres (such as Foxwoods in Connecticut; Sun City in South Africa; and many tribal casinos in the U.S.)
- Urban or suburban casinos: located in or near major metropolitan areas (such as those in Detroit; in New Orleans; most U.K. casinos and the Crown Casino in Melbourne) (Eadington 2003).

4.32 Another category can be added to this list which could be described as ‘city casinos’: urban centres whose primary industry is casino gambling, such as Las Vegas and Atlantic City.

Apart from their locational structure and size, casinos are also characterised by residents with quite different demographic profiles, from affluent white players, to those from impoverished ethnic minority communities.

4.33 The new British category of regional casinos does not have a direct equivalent internationally. In terms of facilities offered, these venues are closest to resort or destination casinos. However, in terms of location, unlike many casinos in the U.S., Australia and elsewhere, regional casinos in Britain are likely to be situated relatively close to major population centres.

4.34 The social costs of casinos tend to be exported to the areas where the gamblers who play them live, so that casinos that draw on large non-local markets tend to have low social costs relative to economic benefits, and those that rely on locals as their primary customers have high ones. Rural and resort casinos are therefore associated with the lowest social costs, since customers for those generally tend to come from beyond the casino's own jurisdiction. However, urban or suburban casinos tend to draw large numbers of local residents to them, and so social costs remain within the community where the gambling facilities themselves are located.

4.35 Eadington notes, however, that there is also an extent to which these casinos may simply retain locals who would have travelled outwith the region to gamble anyway. In this scenario, social costs are no higher, since those individuals would have still 'brought their problems back' to the local community, as it were, as well as leaving the profits in a neighbouring jurisdiction (Eadington 1993).

4.36 All of this means that casinos can have very different types of impacts, depending on size, location and local market. Unfortunately, few studies take these factors into account either when reporting their results, or when attempting comparisons with other research findings. The following discussion is therefore of the impacts of casinos on rates of problem gambling in a general sense, although details of the relevant factors as listed above are included when available.

4.37 In this section, the most noteworthy finding is that studies of casino proximity and rates of problem gambling have found positive, although often non-linear, relationships.

Examples of research

4.38 One of the most striking demonstrations of this came from the survey conducted by the National Opinion Research Centre (NORC) in the U.S. for the NGISC (Gerstein et al 1999). NORC analysed social and economic changes in 100 communities that lay within a 50 mile radius of one or more casinos between 1980-1997. They found that the location of a casino within 50 miles (versus 50 to 250 miles) of an individual's home was associated with approximately double the prevalence of pathological gambling (2.1% compared to 0.9%).

4.39 Similar findings were reported in research by Welte et al (2004). This study analysed census data and geographic information, and reported that the location of a casino within ten miles of an individual's home was independently associated with a 90% increase in the odds of being a problem or pathological gambler. In addition, individuals living within disadvantaged neighbourhoods were found to have higher rates of gambling problems.

4.40 A number of prevalence surveys from North America have also suggested that the prevalence of problem gambling increases as a result of the introduction of casino-style gambling. In Minnesota and Iowa, for example, the prevalence of problematic behaviour increased significantly over a four year and six year period respectively (Emerson and Laundegran 1996; Volberg 1995). In the case of Minnesota, the increase followed a dramatic expansion in the availability of lotteries, high stakes bingo and more than twenty casinos in the state. In Iowa, the increase followed the introduction of riverboat casinos, Native American casinos and slot machines at racetracks.

4.41 In Indiana, a recent report examined the proximity of casinos to rates of voluntary exclusion from casinos. Voluntary Exclusion Programs (VEPs) exist to allow individuals to voluntarily have themselves banned from casinos, for one year, five years or for life. Analysis of trends in VEP rates showed a strong relationship between proximity to a casino and higher enrolment rates, with rates rising as distance from a casino decreased. In addition, the researches also found that calls to a problem gambling helpline that mentioned casino gambling also increased with proximity to a casino. Although the study cautioned that such rates should not be taken as indicators of problem gambling prevalence, they noted that the use of such programmes at least demonstrate that an individual feels that they have a problem with casino gambling (Policy Analytics 2006).

4.42 Unfortunately, there are relatively few studies of the impacts of casinos in urban areas. Detroit, for example, opened three in 1999. Detroit has a large ethnic minority population, a downtown area characterised by high unemployment and crime, and has been experiencing an economic downturn since much of its manufacturing base left in the 1970s. Although opposition to the casino – especially from the media – exists, with constant reports of the bankruptcies and suicide related to it, little is known about its actual social impacts.

4.43 However, the number of voluntary exclusions (or ‘dissociated persons’ as they are known) has grown from 56 in 2001 to 508 in 2003, indicating a significant increase in individuals who felt they had problems in controlling their gambling (Associated Press 2003). A small scale study of problem gambling in the city noted that the casinos’ main market was mostly local, and estimated that over 5% of those living in the city and around 3% of the suburban population, had gambling problems (Wong et al 2000).

4.44 America’s other large urban casinos are in and around New Orleans. Between 1993 and 2000, more than a dozen riverboat casinos were introduced throughout the state, with a large land-based enterprise opening in New Orleans in 2000. Not only did this casino fail to regenerate the surrounding it area, it was forced to twice declare bankruptcy. Again little research exists on its social impacts.

4.45 However the Louisiana Office for Addictive Disorders carried out surveys of the region over a seven year period, beginning in 1995, two years after the first casinos opened. Although it is not possible to estimate the impact of the introduction of casinos on rates of problem gambling, and although the surveys had small sample sizes, the rate of problem gambling for the state as a whole appears high, at 3%.

4.46 Three surveys found this rate to be ‘remarkably stable’ over time, although it fell dramatically in 1998. Significantly, this was also around the time the casino declared bankruptcy. In the most recent survey, over three quarters of calls to the state’s gambling helpline were primarily related to casino gambling, with the remainder related to machines. The most regular gamblers were the unemployed, although it is not known what percentage were also problem gamblers, or how much they spent playing (Vogel and Ardoion 2002).

4.47 In Australia, the impacts of casinos in cities like Melbourne, Sydney and Perth have received surprisingly little rigorous analysis by researchers. This may in part be due to that country’s focus on its largest form of problem gambling – EGMs – towards which the majority of research is directed. However, it has been noted that the opening of the Burswood casino, a large-scale ‘resort’ casino in Perth (which houses the state’s only EGMs) in 1985, was associated with a dramatic increase in expenditure which subsequently declined and levelled out in the 1990s.

4.48 Similarly, the opening of the Crown Casino in the riverside area of Melbourne in 1994 was also associated with a dramatic increase in expenditure, which has subsequently declined (SA Centre for Economic Studies 2005). A survey of gambling activity in Melbourne for the Casino and Gaming Authority reported a steady decline in casino participation since the casino opened, from a peak of 25% in 1997, to 18% in 1998, and 16% in 1999. However, the study noted that those who *do* participate tend to play more often and spend more when they do. Unfortunately, it did not provide reliable estimates of problem gambling trends (Roy Morgan Research 2000).

4.49 In Canada, studies of the impact of casino openings have reported mixed results. For example, Room et al (1999) studied social impacts of the introduction of a casino in Niagara Falls, Canada, in 1996. Niagara Falls was in the position of being a small sized city (population 75,000) which had experienced an economic downturn as a result of the closure of several large plants, and was in a good position to attract tourists, including many from across the border in the U.S., to a destination or ‘resort’ casino.

4.50 One year after the casino opened, local residents’ casino gambling had increased four fold, with expenditure increasing by 25%. Participation was particularly marked among middle and lower income groups, and young and single people. Participation increased 4.6 times for low income individuals, but only 2.5 times for high income ones. The authors note that prior to casino opening, casino gambling was largely limited to higher income groups in Niagara Falls.

4.51 Problem gambling also increased by a statistically significant amount, from 2.5% to 4.4%⁵. There were also significantly more reports of problems among family members and friends. The authors reported that these problems were confined to the city of Niagara, and did not spread throughout the rest of the province.

4.52 They also found that support for the casino among local residents actually rose, and that three quarters of the populations supported it one year after opening. This was despite the fact that both the harms and the benefits that many had expected from the casino failed to materialise. Many residents expected increased crime, problem gambling, marital and familial breakdown, traffic congestion, noise and drinking disturbances. With the exception of problem gambling, none of these materialised. On the other hand, fewer people reported benefits such as increased employment and incomes, more and better stores, services and entertainment, and increased property values, that they had expected a year before.

4.53 The authors' findings concurred with these perceptions, reporting only slight economic benefits in contrast to the significant gains predicted, and stated that, 'at least in the short term, problems from the increased availability of gambling manifested themselves not in the public arena but rather in the arena of private life' (Room et al 1999: 1449).

4.54 A positive relationship between casino proximity and gambling problems was also found in the 1999 New Zealand national survey (Abbott & Volberg 2000). In that study, higher prevalence rates were found in the two New Zealand cities, Auckland and Christchurch, with casinos than in other cities without them. In some analyses this relationship remained when other factors associated with problem gambling were controlled for statistically, suggesting the differences were a consequence of the presence of casinos.

4.55 If the numbers of individuals presenting for treatment after gambling availability has increased this is often taken as evidence of a relationship between the two. Evidence from the New Zealand gambling hotline indicated a sharp rise in calls from people reporting problems with casino gambling following the opening of a new casino (Sullivan et al 1997). However, such relations should be treated with caution, as there is no way of knowing whether the increase in calls was due to new problems arising from participation in casino gambling, a result of increased public awareness and advertising of the hotline number in the casino itself, or other factors.

4.56 There has been little research in Britain on the effects of availability on problem gambling, although the launch of the National Lottery in the U.K. in 1994 provided an opportunity to examine the impact of the introduction of a major form of gambling on gambling problems. One survey by a market research group found a 17% increase in calls to Gamblers Anonymous in the year following the introduction of the Lottery (Mintel 1995). Another study examined the Family Expenditure Survey data a year before and a year after the introduction of the

⁵ Using a short, five item version of the SOGS, on which respondents report two or more problem items (rather than five in the longer version) to be classed as having problems. The authors also averaged out all the positive responses, and reported an increase in these from 0.131 to 0.198 – smaller figures, but which still represent a significant increase of round one half.

Lottery for evidence of increased problem gambling, and found significant increases in expenditure on gambling after the introduction of the Lottery (Grun & McKeigue 2000)⁶.

4.57 The authors argued that these results were consistent with the ‘single distribution theory’ which has also been applied to other areas of public health, such as alcohol consumption. The single distribution theory states that the extent of an activity like gambling is distributed amongst the population in a curve, characterised in the main by moderate consumption, but by a minority of excessive behaviour in the tail. The curve responds as a single entity to changes in overall distribution so, for example, when general gambling activity increases, then the proportion of excessive gambling will increase too.

4.58 Although there is some divergence in the findings reported here, much of the research suggests that factors that lead to increased availability and opportunities to gamble throughout the general population will also contribute to a corresponding increase in the prevalence of problem gambling. However, these relationships are complex. Recent longitudinal surveys and other research from North America, Australia and New Zealand has begun to cast doubt on this relationship, and suggests that it may apply in the initial stages of gambling expansion but, in some situations, subsequently break down.

Longitudinal Studies

4.59 While some of these studies of prevalence and incidence provide interesting results, they do not track changes over time, and so firm conclusions cannot be drawn about the relationship between availability and problem gambling. The question of whether gambling availability actually causes increased problem gambling is one that requires longitudinal research to answer. Several longitudinal studies have examined these relationships, and these have tended to produce some unexpected results.

4.60 The surveys in the first part of this section discuss ‘gambling’ in general, including, of course, casino gambling, even though this is not always discussed separately. The surveys in the second part do consider casino gambling separately.

Longitudinal general gambling studies

4.61 In New Zealand, longitudinal surveys have tracked patterns of gambling over seven years, and have found reduced rates of problem gambling, despite increases in availability⁷. The first of these surveys was conducted in 1991 and found a lifetime pathological gambling prevalence rate of 2.7%; and a current one

⁶ In the year before the Lottery, 40% of households gambled, spending £1.45 per week (0.5% of income), while in the year after, this had risen to 75%, spending £3.81 or 1.5% of household income per week.

⁷ New Zealand is the only country where national longitudinal surveys have been undertaken using the same measurement instrument, the revised version of the SOGS (SOGS-R).

of 1.2%. A second survey conducted in 1996 estimated current pathological gambling to be 0.4%, a third of the previous study.

4.62 However, although comparable in terms of methodological quality to most gambling surveys the report's authors did not consider it to be sufficiently robust to generate reliable findings. One concern was the low response rate for Maori and Pacific Islanders, groups at particularly high risk for problem gambling in the previous survey (North Health 1996).

4.63 A third survey was completed in 1999 (Abbott & Volberg 2000). During the interval, gambling availability had dramatically increased: casinos had been introduced to Christchurch in 1996 and Auckland in 1998, and expenditure on gambling machines had increased three-fold. Given the increased availability and expenditure on high-risk forms of gambling, rates of problem gambling would have been expected to rise. However, they were actually significantly lower than in 1991: the lifetime estimate was one percent; the current estimate 0.5%⁸.

4.64 Studies from Australia also appear to show decreases in problem gambling, despite increased in availability. One survey of four Australian cities conducted in 1991 estimated 'probable pathological gambling' to be 6.6% (Dickerson et al 1996). After this study had been carried out, Australia underwent a period of increased gambling availability and expenditure, particularly on high intensity electronic gaming machines, which greatly expanded in clubs, pubs and casinos. However, subsequent surveys actually measured *lower* rates, and the latest estimate stands at 2.1% (PC 1999).

4.65 As with New Zealand, these findings do not support the expectation of increased problems with increased availability and expenditure. However, the authors of these studies were careful to point to the possibility of methodological shortcomings that they were, as yet, unaware of, and urged caution when interpreting results.

4.66 In addition to these New Zealand and Australian national studies, a number of repeat surveys have been conducted at state and provincial levels in Canada and the United States. Not all report similar trends to those of the Australian and New Zealand data. For example, studies in Iowa, New York, Minnesota and Québec found substantial and statistically significant increases in prevalence ranging between six to ten years (Volberg, 1995, 1996; Jacques et al, 1997).

4.67 In Minnesota and Iowa problem gambling increased significantly over a four year and six year period respectively (Emerson and Laundegran 1996; Volberg 1995). In the case of Minnesota, the increase followed a dramatic expansion in the availability of lotteries, high stakes bingo and more than twenty casinos in the state. In Iowa, the increase followed the introduction of riverboat casinos, Native American casinos and slot machines at racetracks.

⁸ It was found that weekly gambling participation also decreased (from 48% in 1991, to 40% in 1999). This reduction was a consequence of fewer people participating weekly or more often in continuous forms including electronic gaming machines, track betting and instant lottery tickets.

4.68 A comprehensive review of fifteen longitudinal North American studies reported that seven showed an increase in prevalence estimates over time, and eight showed lower ones (Abbott 2001). In most cases, particularly where the interval between surveys was three years or less, changes were small and generally not statistically significant. In four of the six studies where the gap was more than three years, increases were apparent, and for the remaining two studies, slight decreases were found. A similar variation in findings is evident for the small number of Australian state-level ‘replications’, although again methodological problems compromise straightforward interpretation of these studies (PC 1999).

4.69 In all of the studies considered above, gambling availability and expenditure has increased between surveys. However, what is notable is that, although the amount of individuals who gamble occasionally has increased, the proportion who report much heavier participation has reduced significantly (Abbott 2001; Volberg 2001). If the percentage of the overall population who gambles heavily on high-risk types of games – i.e. the group most likely to be problem players – actually *decreases* while overall expenditure rises, then it could be expected that problem gambling prevalence would level out or even reduce.

4.70 In this context, a recent study of four states is particularly interesting (Volberg 2006). In all the four states – Montana, North Dakota, Oregon and Washington State – substantial amounts of legal gambling existed at the time of the first (baseline) survey and increased further by the second (replication).

4.71 All four states introduced new casinos – two each in Montana and Oregon, five in North Dakota and ten in Washington State. In addition to opening this large number of new casinos, Washington State also allowed commercial ‘card rooms’ to greatly increase their maximum number of tables. Two states – Montana and Oregon – permitted electronic gaming machines to operate, although the density of machines was much greater in Montana than in Oregon. North Dakota was the only state without a lottery but had over 300 small charitable gambling operations in bars and restaurants.

4.72 Findings were unexpected. Casino gambling increased substantially, as would be expected from the dramatic increase in availability. Overall participation dropped however – probably as a consequence of casino gambling displacing other types. However, trends in changes in problem gambling were uneven: they increased in Montana and North Dakota and decreased in Oregon and Washington State. More severe cases of problem gambling changed most dramatically, with substantial and statistically significant decreases in Oregon and Washington State and substantial and statistically significant increases in Montana and North Dakota.

4.73 This is particularly surprising since Washington State, in particular, introduced large numbers of new casinos. The author concluded that ‘these data suggest that something more than gambling availability and participation can affect the prevalence of problem and pathological gambling’ (Volberg 2006). Looked at more closely, that factor appears to be the presence or absence of services to treat problem gambling. While Oregon spent around \$2 million per year on services and Washington State around £150,000, Montana and North Dakota spent virtually nothing.

4.74 Overall, the results clearly demonstrated that problem gambling prevalence declined in the states with services and increased in the states without them. This indicates that availability is not the only factor at play in determining changes in rates of problem gambling, and that appropriate service provision can also be a crucial factor here.

4.75 Reports of declines in problem gambling, despite the introduction of new forms of gambling such as casinos, in the New Zealand and Australian studies mentioned earlier are consistent with the findings of this U.S. study. In New Zealand, between the 1991 and 1999 surveys, a national gambling problem helpline and extensive network of specialist counselling and treatment services was established. There was also a high level of publicity about the risks associated with excessive gambling and problem gambling.

4.76 In Australia too, as gambling availability and participation increased, many states and territories developed services to deal with problem gambling between the 1991 'four cities' study and 1998 national survey. It is likely that the expansion of such services has had some impact on overall rates of problem gambling in these jurisdictions. However, while this may be the case, as ever, it should be cautioned that further research is required to determine the impact of service provision and other factors on problem gambling prevalence.

4.77 In addition to these general studies of changes in problem gambling prevalence, a few longitudinal studies have examined the impacts of casinos alone.

Longitudinal Casino Studies

4.78 In 1994, Windsor, Ontario established a large destination or 'resort' casino which quickly became the highest-grossing casino in North America, taking in over one million dollars per day. The Windsor casino provided a unique opportunity to examine the effects of a large casino on a relatively small city (population 200,000), and a team of researchers examined its impacts one and four years after opening (Govoni et al. 1998; Frisch et al 1999). The study reported that interest in the casino peaked upon opening, with just under half the population visiting at least once. Expenditure among Windsor residents increased, and four years later, there was a large increase in the percentage of local residents who gambled (from 66% to 82%).

4.79 However, the study found no statistically significant increases in problem gambling either one or four years after the casino opened. Rates only moved from 3.6% to 3.7% over the period. Because of population increases, and increased numbers of people gambling, the absolute number of problem gamblers did change, rising from an estimated 4,600 to 6000. The authors noted however that this did not represent an increased risk of developing a gambling problem, and was not a direct effect of the casino.

4.80 In addition, the study found that residents' approval of the casino increased over time: with 63% approving of it four years after opening, compared with 54% before opening. Disapproval also decreased in the same time, from 30% before opening to 24% four years later. Crime also decreased in the downtown casino area, attributed to increased policing (Frisch et al 1999).

4.81 Another recent study of a casino opening in Quebec found no overall statistically significant increase in problem gambling five years after opening (Ladouceur and Jacques 2006). Researchers found that, when the casino opened, local residents visited more regularly and lost more money gambling than they had previously on other activities. However, this 'spike' of activity tapered off after five years. The proportion of pathological gamblers in the area rose from 1.4% prior to the casino to 1.8 % a year later, before dropping to 1% after five years. The Quebec average is 0.8%.

4.82 Yet another Canadian study is following casinos in four relatively rural areas, to assess changes in prevalence rates and local resident's perceptions of the casinos impacts in their communities over time (Nuffield and Hann 2003). Three years after they had opened, problem gambling had increased very slightly, but not by statistically significant amounts among residents in all of the four areas. In addition, spending patterns seemed relatively unchanged. In one area, Brantford, before the casino opened, residents in the two lowest income groups were most likely to have spent nothing on gambling in the last month, while those in the highest groups were most likely to have spent money on it. The differences were statistically significant.

4.83 Three years after the casino opened, these differences were no longer statistically significant, but the patterns remained unchanged: the lowest income groups were still most likely to spend nothing and the highest income groups most (Shercon Associates Inc. 2003). These findings were consistent with those of a large Ontario survey of problem gambling, which concluded that:

"low income persons are not more likely to gamble, but they are more vulnerable to gambling problems if they do. Individuals with incomes less than \$30,000 are the most likely to be classed as problem gamblers. Interestingly, they are also the most likely to be non-gamblers" (in Shercon Ass. 2003, 54).

4.84 In addition, in each of the areas, residents were more aware of gambling treatment facilities after the opening of the casino than before. In all areas, and in Brantford in particular, there was a substantial increase in the amount of public advertising of the phone number for the Problem Gambling Helpline, and a local Addiction Services agency had undertaken a wide ranging series of public presentations to various public organisations, the general public and schools, raising awareness of the risks of problem gambling.

4.85 Again, in Brantford, the numbers of individuals seeking counselling for gambling problems increased after the opening of the casino. This increase was much higher, proportionally, than the slight increase in numbers of problem players. It could be speculated that the awareness raising and extension of treatment had helped to keep the numbers of potential problem players down.

4.86 A note of caution should be sounded here, however. These Canadian casinos may be very different, in terms of their local populations and locations, than those proposed for Scotland. They tend to be located in areas that are relatively sparsely populated, with relatively affluent residents, and attract large numbers of tourists which provides their main turnover. It is likely that the applicability of findings from these studies to Scotland would not be straightforward.

4.87 Moving to urban casinos, the research base on social impact is much less developed.

4.88 In New Zealand, Abbott, Williams and Volberg (1999; 2004) examined rates of problem gambling from their longitudinal survey. In the seven years between surveys, casinos had been introduced to two of New Zealand's three major metropolitan centres, providing a natural experiment whereby participants living in them could be compared with their counterparts in the city without a casino. It was also possible to control statistically for other factors that differed between the casino and non-casino centres, including those known to be associated with problem gambling. The study did not find any significant impact from casinos on participants' problem gambling.

4.89 However, although the results did not show a relationship between the introduction of casinos and problem gambling, it should be noted that participants were not fully representative of the adult population living in centres studied. All either had gambling problems or gambled frequently without problems prior to the introduction of casinos. By the time they were re-assessed, many had reduced their interest and involvement in gambling and all were in their mid-twenties or older.

4.90 While it cannot be concluded from that study that casino introduction had no effect on gambling prevalence in the general population, the findings do suggest casinos did not create more severe problems for people with existing problems. As mentioned earlier, the 1999 national survey *was* representative of the adult population, and it did find higher prevalence rates in the two major cities with casinos. It is possible therefore that any increased problems were concentrated in the sectors of the population not included in the longitudinal study (Abbott & Volberg 2000)

4.91 From the studies reviewed so far, it can be seen that the relation of gambling availability to problem gambling, particularly with respect to casinos, and over time, is extremely complex. While the National Research Council concluded that research findings were "consistent with the view that increased opportunity to gamble results in more pathological and problem gambling" (NRC 1999, 84), the Productivity Commission acknowledged the ambiguity and decided that studies were "inconclusive about the links between access and problems" (PC 1999, 8.27).

4.92 In attempting to account for the existence of stable or declining rates of problem gambling over time, even when availability increases, some researchers have suggested that societies might undergo a process of adaptation, whereby they adjust to the existence of gambling around them, and develop various informal controls and social sanctions that protect against developing problematic behaviour (Shaffer et al 1997)⁹.

4.93 In 2004, the Responsibility in Gambling Trust (RIGT), in the U.K., commissioned an international review of the research evidence on the risk factors associated with problem gambling (Abbott et al 2004). After an extensive analysis, the report's authors concluded that the relationship between availability of gambling opportunities and increased rates of problem gambling was had not been established and if existed was not linear.

4.94 They identified studies which showed jurisdictions in which rates remained the same or even declined over time, despite the introduction of increased opportunities to gamble. They also highlighted the idea of 'adaptation', whereby communities develop informal coping mechanisms to deal with gambling availability, and also the influence of public health campaigns to raise awareness of the risks of problem gambling, and availability of services to provide treatment for those who develop problems.

4.95 The Report concluded that:

“While acknowledging the various methodological problems and potential for confounding factors to complicate interpretation, in our view the replication [longitudinal] studies do not support the proposal that gambling problems invariably increase with rising levels of gambling exposure. This does not mean there is no relationship. Rather it is probable that other factors, such as greater awareness of problem gambling, availability of problem gambling services, and changing participation patterns, have potential to counteract the problem generating effects of increased availability. This may be a highly dynamic process, with the relative balance between risk and protective factors shifting over time” (Abbott et al 2004: 156)

Conclusions

4.96 Availability of gambling and type of game are features that are strongly associated with problem gambling. These features come together in non-casino EGMs which, worldwide, show the highest association with gambling problems.

⁹ Some have pointed to the fact that prevalence rates that are relatively consistent across jurisdictions and stable over time may obscure the movement of individuals in and out of disordered behaviour. In other words, the suggestion is that some people develop gambling problems, while others recover from them in an ongoing basis in a way that cancel each other out. For example, an eleven year longitudinal study with four assessment periods found that the overall prevalence of problem gambling remained steady at about 2-3%, although different groups of individuals contributed to these rates during the study (Slutske et al 2003; Shaffer et al 2004)

The relationship with other forms of gambling is less clear cut. Casinos are also associated with high rates of problematic behaviour, although the picture becomes more complex here, with a range of other factors, including the size and location of the casino, coming into play. Simply not enough is known about these complex variables, and the way they interact to influence problem behaviour to allow conclusive statements on the impacts of casinos to be made. Although much of the research seems to suggest that proximity to casinos increases rates of problem gambling in the local population, longitudinal research also suggests that such rates may well decline over periods of around two to seven years as communities adapt to the presence of gambling around them. Furthermore, there is also evidence to suggest that public health initiatives, such as the provision of treatment and information about problem gambling, can militate against such increases.

5.1 Although a considerable amount of data – albeit of a variable quality – on the social impacts of gambling exists from an international perspective, the evidence base for the U.K., and particularly Scotland, is practically non-existent. In addition, as has been noted already, much of the available material is methodologically weak and open to interpretation. The social impacts of gambling, and especially casino gambling, are even less straightforward than economic impacts to quantify and, to date, many studies have produced inconclusive or contradictory results.

5.2 Individuals with gambling problems often experience a range of other problems, including drug and alcohol and mental health problems in what are termed ‘co-morbid’ relationships. For example, the Australian Productivity Committee reported that around one in five severe problem gamblers suffers from alcoholism or other dependencies. Other studies have found similarly elevated rates of conditions such as alcoholism, drug addiction, mental health problems, homelessness and criminal behaviour. Because of this, it can often be difficult to disentangle the effects of gambling from those of a range of other factors. While problem gambling may exacerbate other dependencies, these in turn may exacerbate problem gambling. A variety of social impacts have been associated with problem gambling, and these are reviewed here.

5.3 Different forms of gambling have different impacts and, from previous chapters, it should be noted that the most serious adverse impacts are associated with EGMs, betting and casino table games. The first section of this chapter discusses the impacts of gambling in a general sense, while the second section moves on to consider studies that have examined the specific impacts of the introduction of casinos.

Social and Personal Impacts

5.4 The Australian Productivity Commission found that between five and ten people are affected by every individual who is a problem gambler, including spouses, children and other family members, friends, co-workers and employers as well as those involved in financial relationships. The financial stress, lying and arguments that can develop around problem gamblers lead to significant pressure on families, with one in ten Australian problem gamblers saying that their behaviour had led to relationship breakdown, and one in ten of those in counselling admitting it had led to domestic violence. In Australia, problem gambling is estimated to be involved in some 1600 divorces annually.

5.5 Reduced familial stability and household income can also affect the children of problem gamblers, who may display behavioural problems and problems at school (PC 7.1-7.33). Other studies have borne out these findings. For example, one found that the children of problem gamblers have a higher than normal involvement with addictive substances, more psycho-social problems, and more problems at school than others (Jacobs et al 1989). Wives of problem gamblers report higher

than average rates of depression, verbal and physical abuse and suicide attempts (Lorenz and Jaffee 1988).

5.6 When individuals are preoccupied with ways in which to find the time and money to gamble, their work life tends to suffer, although the Australian evidence found the effects of this to be relatively slight. Although 50% of severe problem gamblers in counselling reported having lost time at work due to gambling, the majority with less severe problems reported seldom losing time at work, and only some 19% had done so.

5.7 Other studies have found that problem gamblers report higher than average incidences of job loss, and those who remain in work report lost productivity through lateness, non-attendance and preoccupation with gambling (Ladouceur et al 1994). Problem gamblers also tend to suffer greater ill-health than the general population, including conditions such as depressive moods, insomnia, anxiety, headaches and stomach problems, which may also contribute to absenteeism (PC 1999; Gerstein et al 1999).

5.8 The Australian Productivity Commission found that around 60% of those with gambling problems indicated that they had suffered depression as a result of gambling, and around 9% had considered suicide. Suicidal ideation rose to 60% of problem gamblers in counselling.

5.9 Research has found that Las Vegas has the highest rate of suicide in America, for both residents and visitors (Phillips 1997). While the author of the study attributed the rates to casino gambling, other interpretations have pointed to the broader factors, such as the rapid growth of cities like Las Vegas, which leave many individuals isolated and without a sense of community, and the unrealistic expectations and prior problems of individuals who move there (Bhatt 1998). Another study of gamblers attending Gamblers Anonymous in the U.S revealed that 13% had attempted suicide, compared with 1.1% for the general population (Frank et al 1991).

5.10 As with many of the social and personal impacts involving gambling, causal relations can be difficult to establish here. For example, as the Productivity Commission point out, it may be the case that an individual is depressed, goes on a gambling binge with devastating financial consequences, and eventually considers suicide. Is gambling here the cause or an effect of initial depression? However, despite the complexities involved in disentangling the various contributory factors to such scenarios, the Commission concluded that the weight of evidence showed that gambling did have distinct effects, stating: "In summary, there can be little doubt that there are suicides linked to gambling – it probably lies somewhere between 35 and 60 a year" (PC 1999: 7.23).

Financial Problems and Indebtedness

5.11 For obvious reasons problem gamblers are very likely to suffer financial problems. The British study of casino patrons found that 87% of the severe problem gamblers and 65% of the problem players had been forced to turn to others to

relieve a desperate financial situation caused by gambling, whereas none of the social players had done this (Fisher 1996). Forty per cent of the severe and 52% of the problem gamblers had sold their possessions to pay gambling debts, compared with 2% of social gamblers. Forty six per cent of the severe and 25% of the problem gamblers had committed illegal acts to gamble and/or pay gambling debts, compared with only 1% of social gamblers. In the U.K., the average level of debt of problem gamblers receiving treatment from GamCare in 2003 was £28,000 (*GamCare Services Report 2003*).

5.12 The NORC survey found that almost 20% of pathological gamblers had filed for bankruptcy, compared with rates of 5.5% for low risk gamblers and 4.2% for non-gamblers. A similar percentage – 22% – of Gamblers Anonymous members had declared bankruptcy (NGISC 1999: 7-16).

5.13 During the 1990s, the state of Iowa introduced new forms of gambling, so providing the conditions for a ‘natural experiment’ on the impacts of the activity. The director of Consumer Credit Counselling testified to the Gambling Commission that, before the increase in gambling outlets, 2 to 3% of clients attributed their credit problems to gambling. After the expansion however, the number had increased to 15%. Furthermore, the Commission established that bankruptcies in Iowa increased at a rate significantly above the national average in the years following the introduction of casinos, and that 19% of these bankruptcies involved gambling-related debt. There appeared to be a geographic dimension to this trend, with nine of the 12 Iowa counties with the highest bankruptcy rates having gambling facilities in or directly adjacent to them (NGISC 1999: 7-16).

5.14 The Productivity Commission noted that a crucial aspect of the impact of problem gambling is the extent to which it represents a large or small share of total income, and found the ratios of gambling expenditures to incomes very high among problem gambling households. Gambling losses averaged around 20% of household income for problem players, compared with only 1% for recreational players. (PC 7.47). For three quarters of problem gamblers receiving counselling, expenditure exceeded 20% of income.

5.15 In addition, levels of debt for such individuals are high: the Commission found an average debt level of over AU\$10,000 for all clients in counselling. However, some of these had no debt at all, and so for those who had any, the average figure was nearer AU\$ 17,000. Other studies have found levels of gambling-related debt of AU\$ 4,564 for women and AU\$ 33,158 for men (Dickerson et al 1995). In the U.S., a study of a group of gamblers receiving treatment found an average level of debt of just under \$40,000 (Lorenz et al 1999).

5.16 The Productivity Commission noted that American evidence appeared to show bankruptcy rates several times higher than Australian studies, and speculated that these results may be picking up on other, confounding variables. In Australia around 1.3% of bankruptcies were related to gambling, meaning that only 0.1% of problem gamblers are declared bankrupt in any one year. However, the Commission noted that it is a criminal offence to become bankrupt as a result of gambling in Australia, and so there would be strong incentives for individuals to conceal the

cause of their financial problems in these cases. As such, these figures could well be an under-estimate.

Crime

5.17 While relationships between the impacts of different types of gambling on crime rates are difficult to establish, those between pathological gamblers themselves and crime appears more clear-cut. Many studies have found that pathological gamblers commit more crimes in order to finance their playing. As access to funds becomes limited, many resort to illegal activities to pay debts, appease bookmakers, maintain appearances, and of course, provide more money to gamble with (Leiseur 1987; NGISC 1999: 7-13).

5.18 The NORC study reported that pathological gamblers had higher arrest and imprisonment rates than non-pathological gamblers, with a third of pathological gamblers having ever been arrested, compared with only 10% of low risk and 4% of non-gamblers. In addition, 23% of pathological and 13% of problem gamblers had ever been imprisoned. The study also calculated the costs associated with these figures, and estimated that pathological and problem gamblers accounted for \$1,000 in excess lifetime police costs each. The 32% of pathological gamblers who had been arrested had cost \$10,000 each (NGISC 1999: 7-14). A survey of four hundred members of Gamblers Anonymous found that 57% had stolen to finance their gambling. Together, they had stolen \$30 million, or an average of £135,000 per individual (Leiseur 1987; NGISC 1999: 7-13).

5.19 The Australian Productivity Commission found that around 1 in 10 problem gamblers had committed a crime because of their gambling, and that up to two thirds of problem gamblers in counselling had done so. The offences tended to be non-violent property crimes, such as theft, embezzlement and misappropriation, and the majority did not result in legal action, with around 40% being charged and convicted (PC 1999: 7.67).

5.20 Very little research into the associations between crime and gambling has been conducted in the U.K.. One study of criminal offences among a group of Gamblers Anonymous attendees (Brown 1987) found that the types of crime associated with compulsive gambling were income generating and property-related, covering fraud, forgery, embezzlement and petty theft, at rates that were considerably higher than those amongst the general population. A recent study of offenders on probation found that 4.5% were classed as problem gamblers (Ricketts et al 2000) although it is not clear from any of this research exactly what the patterns of associations are, or what the relationships between offending, gambling and other deviant behaviours might be.

The Social Impacts of Casinos

5.21 Research that has examined the specific impacts of casinos, rather than gambling in general, was outlined earlier (see paragraphs 4.30 to 4.58 and 4.78 to 4.95). In general, this research has found that the location of casinos within a fifty

mile radius (or, in one study, a ten mile radius) of an individual's home roughly doubles rates of problem gambling. This relationship has been measured in prevalence studies, and is also borne out by indicators of problem gambling such as calls to helplines and access to treatment. (Gerstein et al, 1999; Welte et al 2004; Emerson and Laundegran 1996; Volberg 1995). This section now turns to discuss studies of the impact of the introduction of casinos on individuals and communities.

5.22 First, it should be emphasised again that casinos are not homogenous, but are distinguished by a range of factors, including, crucially size and geographical location, which can result in very different impacts.

5.23 To begin with, casinos can vary greatly in size, from small enterprises with limited facilities, to enormous destination casinos, offering an entire leisure experience. In addition, they are built in a range of locations, from densely populated urban metropolises like Melbourne and Detroit, to out of town complexes, such as Foxwoods, to relatively sparsely populated regions throughout parts of Canada and the U.S.

5.24 Large 'resort' casinos, which are often located away from population centres in 'site-specific' venues and incorporate a range of leisure facilities, can attract large numbers of tourists, while smaller casinos, which are often located in more urban or suburban environments generally offer fewer facilities and have less potential for attracting tourists.

5.25 As the social costs of casinos tend to be exported to the areas where the gamblers who play them live, 'resort' and rural casinos are associated with the lowest social costs relative to economic benefits. Urban and suburban casinos, however, tend to draw large numbers of local residents to them, and so social costs remain within the community.

5.26 This means that casinos can have very different types of impacts, depending on size, location and local market. Unfortunately, few studies take these factors into account, either when reporting their results, or when attempting comparisons with other research findings, which make definitive statements on the impacts of casinos difficult to make. As with Chapter Four, the following discussion is therefore of the impacts of casinos in a general sense, although details of the relevant factors as listed above are included when available.

Social and Personal Impacts

5.27 As part of their work for the Commission, NORC analysed social and economic changes in 100 communities in the U.S. that lay within a 50 mile radius of one or more casinos between 1980-1997. They concluded that the casino effect was not statistically significant for crime, bankruptcy or infant mortality (the latter of which was the closest measure of child welfare they could obtain). They were careful to point out that this did not necessarily mean that *no* casino-related crime, bankruptcy or mortality existed, only that any such effects were too small to show up in their statistics, or that, whatever problems casinos may have generated may have been countered, over the long term, by other effects (NORC 1999: 70). Their

casino sample also showed a statistically significant decrease in unemployment (-12%), in income maintenance (welfare) dollars (-13%), and in unemployment insurance (-17%) when compared with towns which did not have a casino within a 50 mile radius.

5.28 NORC also conducted case studies of community perceptions of the impact of increased access to casino gambling. They randomly selected their sites within the U.S., on the criteria that selected communities had populations of at least 10,000, and lay within a 50 mile radius of at least one large casino. They then interviewed prominent individuals within the community, asking for their views on the impacts of new casinos across a number of areas.

5.29 They found that all but one of the communities reported an increase in debt and/ or bankruptcies. Although much of this was attributed to gambling losses, other explanations were considered. These included the possibility that casinos offered the promise of jobs and financial stability for disadvantaged individuals, who could then move into the community, bringing their existing problems with them, to attempt to build a new life. If the only work available were part time and service positions, their problems could be exacerbated and could lead them, eventually, into financial distress and bankruptcy.

5.30 In this sense, many respondents reported that one of the concerns of the community was the large number of working poor (NORC 1999: 77). Although such findings cannot be taken as a measure of the impacts of casinos, they do illuminate the divergence between perceptions of casinos, and in this case, statistical findings on their impacts.

5.31 However, other studies have found increased bankruptcy rates. One examined personal bankruptcy rates by comparing a group of eight casino communities with a control group of communities that had none (Nichols et al 1999). Of the casino communities, only one possessed a resort casino. They found that casino gambling was associated with statistically significant increase in bankruptcy in seven of the eight communities. The only community that did not show an increase, and actually showed a decrease, was the single resort style casino in the sample, suggesting that the size of the venue could be a significant determinant of impacts.

5.32 Other studies have reported associations between bankruptcy and casino gambling. For example, Barron et al (2002) carried out a large scale longitudinal study, covering over 3000 U.S. counties between 1993-1999. Bankruptcy rates were rising generally during this time, and the researchers controlled for this and estimated that the presence of casino gambling increased bankruptcy rates by 5.4%. Unfortunately, the analysis did not distinguish between casino sizes, so the impacts of different types of casinos could not be estimated.

5.33 While some researchers have suggested associations between gambling availability and rising divorce and suicide rates, the relation of the latter to casinos has been contested. A recent study of eight communities that introduced casinos between 1991 and 1994 found no statistically significant increase in either suicide or divorce. It found that divorce rates were lower in three casino counties, higher in

one and not statistically significant in four. Suicide rates were not statistically different between casino counties and control communities (Nichols et al 2004).

Crime

5.34 The issue of crime is often uppermost in many people's minds when considering the introduction of a casino. A considerable body of research, mostly from the U.S., indicate that the relationships around the issue are not straightforward. Some argue that casinos increase crime, others that they reduce it, and still others that they have no impact either way. For example, it is argued that, if casinos increase problem gambling and problem gambling increases financial problems, then individuals who suffer from these financial problems will turn to crime as a way out of their problems, and also to fund their gambling. It has also been argued that the large sums of money in circulation around casinos may attract organised crime, money laundering and petty corruption.

5.35 On the other hand, it has been postulated that casinos could reduce crime. Unlike most other economic developments, casinos contribute to their own regulation: they employ extensive security, providing their own controlled environments and screening patrons against lists of known criminal offenders. In addition, it is argued that if casinos increase employment, then local residents will be more affluent and so less liable to turn to crime. As is the case with many of the impacts of casino gambling, findings from studies themselves are often contradictory, and do not give clear-cut answers.

5.36 In studies that show increases in crime rates near casinos, it can be hard to know whether gambling has promoted criminality or whether the increased visitors to an area simply increase the number of people who might potentially commit or fall victim to crime. In addition, areas with casinos tend to experience a growth in population¹⁰, which in turn can have the effect of elevating overall crime figures. Extra law enforcement brought in to deal with higher numbers of visitors may result in more arrests – but this could be due to more concentrated policing, not necessarily more crime.

5.37 Yet another difficulty concerns the focus of research itself: some studies examine street crime, some include family crimes, and others concentrate on white collar crime.

5.38 It can be difficult to distinguish between the effects of gambling and the effects of tourism in general. For example, Nevada has one of the highest crime rates in the U.S., although whether this is because of its high levels of tourists or the fact that it has high levels of gambling has not been resolved. Gaming-industry literature and websites often point to an increase in crime following the opening of Disney World in Orlando, Florida as evidence that casinos *per se* do not foster crime— although large numbers of tourists do.

¹⁰ In the U.S., between 1990 – 2000 the population of counties with casinos grew on average 5% faster than those without. More densely populated counties (over 479,000 residents) grew about 8% faster (Baxandall and Sacerdote 2005).

5.39 A comprehensive study on casino gambling in Wisconsin (Thompson et al 1996) found that the only type of crime that showed significant increases either in counties with casinos, or in counties adjacent to those with casinos, was burglary, which increased by 6.7%. There were no increases in violent crimes. Higher rates of burglary were attributed to the growth in hotel rooms, linked to tourism in rural parts of the state, which created new opportunities for the crime. Other studies have shown that non-gambling resort complexes can expect an increase in burglary of 300% over five years (Miller and Schwartz 1998).

5.40 Atlantic City is generally reported to have experienced increased crime rates that have risen faster than the state average. However, this increase has been attributed to a 'tourist effect' rather than a 'casino effect'. Professor Jay Albanese, Professor of Criminal Justice at Virginia Commonwealth University, noted that the increase in crime in Atlantic City was offset by the increased average daily population of the city, and calculated that being the victim of a serious property or violent crime actually decreased in the city after the introduction of casinos (Albanese 1985; 1993).

5.41 He also noted that most studies of the casino-crime connection have tended to focus on street crime. These however, are most often committed by young males, aged 16-24, while casino patrons are typically much older than that. These types of opportunistic crimes may or may not be committed by problem gamblers. It is just as likely however, that petty criminals, drawn to increased numbers of tourists, hotel rooms, etc, account for them.

5.42 White collar crimes such as embezzlement, forgery and fraud on the other hand, may increase among gamblers who run into financial difficulties. However, there is little agreement over to what extent the introduction of casinos is responsible for this. Such crimes have increased for example, in Mississippi, since the appearance of casinos. However, they have also increased in other states which do not have them. As Albanese notes, in all but a few cases, it is difficult to claim that casino gambling 'caused' an individual to commit these kinds of crime, or that they would not have done it anyway without the casino. As ever, more research is needed to tease out the relationships.

5.43 In their work for the NGISC, NORC analysed crime rates in communities within 50 miles of a casino between 1990 – 1997, and concluded that the casino effect was not statistically significant for crime, although as mentioned earlier, they pointed out that this did not necessarily mean that *no* casino-related crime existed, only that any its effects were too small to show up in their statistics, and/or may have been countered, over the long term, by other effects (NORC 1999: 70).

5.44 A study of the ten largest casino markets in the U.S. found that arrest trends for embezzlement, forgery and fraud in nine out of the ten showed no consistent pattern. In fact, the study found that, in general, a greater number of jurisdictions reported more decreases than increases in arrests (NGISC 1999). Another large-scale study of eight small to medium sized casino jurisdictions (population 22,000 – 400,000) also found uneven results. Although minor crimes, such as burglary were slightly more likely to increase, what the FBI describe as 'index crimes' – murder, rape, robbery, burglary, arson, larceny, aggravated assault, and motor vehicle theft –

were not.

5.45 The only exception was Biloxi, the one jurisdiction in the study that had the largest concentration of casinos, and which was the largest tourist market. This also showed the largest increase in crime. The author concluded that it was likely that it was the increased numbers of visitors to the area that accounted for the higher crime rates there. Overall however, they concluded that ‘casinos do not appear to have any general or dramatic effect on crime, especially in communities that do not have a high concentration of casinos’ (Stitt 2001: ii).

5.46 One study however, examined changes in crime rates over a twenty year period, from 1977 to 1996, in which the number of counties with casinos in the U.S. increased from fourteen to nearly 170. It analysed FBI index crimes and found that increases in these were associated with casinos with a time lag of 3-4 years (Grinols and Mustard 2001). This study, and a later report by one of the same authors, attributed roughly 8% of crime in counties with casinos to those casinos (Grinols and Mustard 2001; 2006). They concluded that these crimes were committed by problem gamblers in order to pay off monetary debts, and that they typically reached a severe stage after a few years of a casino opening. It is these heightened crime rates that provide the major costs in Earl Grinols’ calculations of the social costs of casinos, and which inform his conclusion that the social costs of casinos outweigh their economic benefits.

5.47 However, several methodological shortcomings with these studies have been noted. For example, it has been pointed out that they fail to take into account the effect of increased policing on crime rates. In many cases, casino counties introduced extra law enforcement, with the result that more arrests were made. Even if the number of crimes is constant, having more police on patrol increases the chances that any criminals are caught. In addition, it has also been noted that the authors’ only examined casino crime rates for five years. However, their actual data showed that crime rates actually began to decline after this time (Walker 2006).

5.48 The likelihood that different types of casinos may have effects on different types of crime should also be noted.

5.49 An analysis by the Harvard Project on (Native American) Indian Economic Development found that the introduction of Indian casinos, many in poor rural communities, brought a 49% reduction in motor-vehicle thefts and a 39% reduction in robberies. They speculated that the added income, employment and general wealth that the casino brought to the community cancelled out any effects of crime that might be related to gambling itself. However, large and relatively urban casinos were associated with a 25% increase in motor-vehicle thefts. Another study of a range of types of Indian-owned casinos found that, within four years of opening a casino, violent crime had increased 9% and property crimes had increased by 4.4%, an increase accounted for by the upsurge in car thefts and theft from the person (Evans and Topoleski 2002).

5.50 Baxandall and Sacerdote (2005) analysed a large range of materials, including crime and population rates as well as data on 365 casinos across 26 states, to analyse the impacts of the introduction of Indian-owned casinos across the U.S.

between 1990 and 2000. Overall, their results found no evidence of crime waves associated with new casinos. Although they reported a slight increase in reported crimes in counties that had casinos, they concluded that this was due to population increases in those states. Overall, while *total* crime rose, *per capita* crimes (the number of crimes per 1000 residents) actually declined by an average of 3 reported crimes per 1,000 people.

5.51 This study was one of the few to break down results down by casino location and size. Focusing on more densely populated areas – which are the ones most comparable to most of the proposed casino sites in Scotland – they found an average additional effect of 3 fewer crimes per 1,000 people, although this was not statistically significant. However, the per-capita crime rate in these more populated areas that also hosted large-capacity casinos (i.e. those hosting casinos with an average of 1,760 EGMs; somewhat larger than a regional casino in the Scottish context) dropped 9 crimes per 1,000 residents.

5.52 They concluded that casinos were not associated with general increases in crime rates, writing: ‘The total number of crimes can be expected to increase with the introduction of casinos, but only because casinos are associated with population increases which are far larger than any possible decrease in the number of crimes per resident’ (Baxandall and Sacerdote 2005: 15).

5.53 Obviously the issue of organised crime and money laundering are also matters of concern when considering the impacts of casinos. However, Albanese notes that the casino industry itself is as keen to keep out organised crime as local government and communities. These large, publicly held corporations’ investment in public image and stock prices make it relatively easy for them to avoid organised crime infiltration. He notes that the main opportunities for such infiltration come from secondary businesses associated with casinos, such as cleaning, construction and entertainment, and that these need to be screened for any such links (Albanese 2003).

5.54 Although the existence, or extent, of money laundering in casinos is difficult to gauge formally, many individuals with personal experience of working in casinos in Australia and the U.S. testify that they are actually widely used by criminals as money laundering venues (O’Neil 2006: personal communication).

5.55 In conclusion, the impacts of casinos on crime are not clear cut. Different types of casinos may have different impacts, although there is insufficient evidence on this to draw firm conclusions. In addition, the effects of casinos on crime may be highly localized and concentrated on specific kinds of crime: although violent crime and most street crimes seem unaffected, more minor crimes such as burglary may increase. However, this may be an effect of an increased local or visitor population, increased policing, or a combination of all three.

5.56 Ultimately, the NGISC concluded that, although some studies suggested that a relationship between casino gambling and crime may exist, there was insufficient evidence to quantify or define what that relationship might be. It summed up its deliberations by stating: “Taken as a whole, the literature shows that communities

with casinos are just as safe as communities that do not have casinos” (NGISC 1999: 7-14).

Fear of Crime and Quality of Life

5.57 In considering the impacts of gambling on communities and individuals, it is important to take into account perceptions – or misconceptions – and attitudes, as these can affect general feelings of community well-being and security, and impact on overall quality of life.

5.58 A qualitative survey of community leaders by NORC found widespread perceptions that a range of ill-effects followed the legalisation of casino gambling, including indebtedness and problem gambling, as well as a wide range of crimes, such as youth offending, credit card theft and forgery, domestic violence, child neglect and alcohol and drug offences. Although, as we have seen, there is no evidence for much of these impacts, these findings illuminate the divergence between perceptions of casinos and, in this case, statistical findings on their impacts.

5.59 In terms of fear of crime, it can be noted that although some people may assume that casinos will increase the general crime rates in their communities, others may feel that the investment in previously run-down areas, especially in urban environments, may actually make casino neighbourhoods safer. In addition, many individuals may be less concerned about crimes that take place on casino premises, not only because the casinos pay for security, but also because residents are not threatened in their streets or homes.

5.60 This is what appears to have happened in four jurisdictions in Canada where casinos were introduced. Studies showed that the establishment of casinos actually had a positive effect on perceptions of crime. Fear of crime was reduced for local residents in the sites where new casinos were built, with more individuals claiming the area was ‘a safe place to walk alone at night’ after the construction of the casinos than before them. The percentage increase of those feeling safer ranged from 8% to 19%. (Nuffield and Hann 2003).

5.61 A large scale survey of the impacts of eight casinos on fear of crime and quality of life looked at residents ‘social capital’ i.e. their connection to their neighbourhood and community gauged through factors such as fear of crime, community well-being, trust in neighbours and government. For most people (70%), fear of crime remained the same, while for around a quarter, it increased. The greatest increase was associated with the one large casino-county in the study where crime had in fact increased the most.

5.62 In terms of quality of life, most people thought that casinos had had no effect one way or the other. However, the rest were fairly evenly divided between those who thought conditions had improved, in terms of increased standard of living, and those who thought they had not, in terms of increased crime. These differences were relatively small however, and the researchers simply noted that even after their introduction, a minority of opinions continued to be divided over casinos. They

concluded that “contrary to assumptions, the introduction of casinos did not tear the fabric of the community apart” (Stitt 2001: vi).

5.63 It should be noted however, that casinos are likely to have different economic and social impacts on different sections of the community, and this variation, rather than more straightforward assessments of overall approval and disapproval, should be taken into account when evaluating impacts.

The Costs of Problem Gambling

5.64 Various researchers have attempted to measure the social costs associated with problem gambling, described as ‘negative externalities’, which include those associated with job loss, bankruptcy, divorce, ill health, arrest and incarceration, and increased uptake of unemployment and welfare benefits (Gerstein et al 1999). Despite the difficulties in quantifying such costs, to say nothing of less measurable factors such as depression and familial disruption, and several studies have attempted to assign monetary values to such negative externalities.

5.65 However, it should be noted that there are significant problems associated with this type of undertaking, and although many such studies have been undertaken, findings remain contested and inconclusive. In many cases, studies use different criteria for measurement, measure different things, and sometimes approach the subject with particular vested interests. Some of these problems were discussed briefly in Chapter One, and, as cost-benefit analyses are not the focus of this report, they will only be summarised here.

5.66 The economist Douglas Walker provides the most damning verdict on the exercise, stating that research is deficient in two crucial areas: it lacks “an appropriate standardised definition of social cost, and it lacks a methodology for measuring the value of these costs” (Walker 2003: 150). There is general agreement among experts in the field that wide variation exists in what researchers choose to include or ignore as a ‘cost’; many measure things in different ways; and some do not attempt to measure certain intangible costs, such as, for example, depression and familial discord, at all (e.g. Eadington 2003, Walker 2003, Single 2003).

5.67 The result, according to Walker, is that “often costs and benefits are not properly identified so that things that should have been counted as costs or benefits were omitted and other things that should have been omitted were counted” (Walker 2003: 150).

5.68 However, some studies have nevertheless produced estimates for the social cost of gambling. They have tended to use one of two types of methodology. In one, the effect of a particular form of gambling, such as a casino, is estimated through calculating a number of variables, such as employment and crime rates. In the second, the costs generated by individual problem and pathological gamblers are calculated and combined with estimates of the prevalence of gambling problems in the general population in order to come to a figure of the total cost of gambling related problems. It is the latter that has been most widely used, and a number of studies have attempted to assign financial values to the negative externalities

associated with gambling in this way (Grinols 1993; 2006; Lesieur 1998; Dickerson et al 1995; Thompson et al 1996). Within these, a massive diversity exists in results, with estimates of the average annual costs of a problem gambler ranging from \$560 to \$52,000, which can be interpreted either as demonstrating that the financial costs of problem gambling are relatively minor or that they are hugely significant (in PC 1999).

5.69 One of the largest of these analyses was conducted on behalf of the National Gambling Impact Study Commission (Gerstein et al 1999). By controlling for a variety of sociodemographic factors, the study was able to estimate the financial impacts of problem gambling on individuals, and to extrapolate from this to estimate the social costs to society as a whole. Taking into account the costs associated with such features as counselling, lost productivity, ill health, welfare payments and criminal prosecutions the researchers calculated that the annual cost of problem and pathological gambling to the U.S. was around \$4 billion (Gerstein et al 1999).

5.70 Ultimately however, the Commission felt unable to compare these figures with estimates of the economic gains provided by gambling to produce an overall cost-benefit analysis of the impact of gambling on society in general. It argued that there were simply too many variables that could not be adequately quantified to make a definitive statement on the issue.

5.71 In the same year, the Australian Productivity Commission also, somewhat reluctantly, attempted a cost-benefit analysis of gambling. It argued that, overall economic transfers cancelled out net economic gains, meaning that any benefit of gambling should be counted in terms of social factors and consumer satisfaction, and offset with any problems it may create. At this point, however, it too reached a stumbling block. It argued that many of the costs of problem gambling were intangible (such as depression and distress) and many others were so intertwined with other factors that they were not possible to quantify in any meaningful sense.

5.72 Nevertheless, given that various estimates of such costs were being used in public debate, the Commission felt that it should make some attempt at the exercise. To this end, it estimated each social cost on a scale ranging from high to low, to produce a final social cost that ranged from \$AU 1.8 billion to \$AU 5.6 billion per annum. The figures are shown in the table below:

Impact	Low (\$AU million)	High (\$AU million)
Bankruptcy	1.3	1.3
Productivity loss	28	200
Job change	59	59
Police, court and jail	14	14
Familial distress	756	2933
Divorce and separation	417	1120
Violence	2.8	8.3
Depression and suicide	502	1230
Counselling services	20	20
Total Costs (\$AU billion)	1.8	5.6

Source: Productivity Commission 1999: 32

5.73 Benefits were measured as the extra value that consumers derive from gambling above what it cost; i.e. consumer surplus. Based on this, the Commission used economic analysis to estimate the net benefits of gambling consumption (including tax revenue) as between \$AU 4.4 billion to \$AU 6.1 billion per annum. Taken together, this provided an overall outcome that ranged widely between a net social cost of \$AU 1.8 billion to a net benefit of \$AU 5.6 billion for 1997-98. The Commission noted that significant differences by gambling mode existed within this however, with lotteries showing a clear net benefit, and gaming machines the possibility of a net loss.

5.74 Such an estimate serves to show the practical difficulties of assigning financial values to the costs of problem gambling.

5.75 Recently in Britain, some analyses of the overall costs of problem gambling have been attempted. Two reports which received considerable attention were delivered by consultancy firms the Henley Centre (2004) and Hall Aitken (2006). Both reports were critical of the expansion of gambling, with the Henley Centre estimating that the new legislation would increase problem gambling by 38% and create 700,000 problem gamblers. The Hall Aitken study explicitly adopted the Henley Centre's methodology to arrive at similar figures for problem gambling in various regions, including Glasgow.

5.76 However, the Henley Centre research, which was commissioned by the British Amusement Catering Trades Association (BACTA), was criticised by an independent review from the Department for Culture, Media and Sport (Farrell 2004). This review highlighted methodological weaknesses (in terms of statistical modelling and sample sizes) which undermined the predictions of the report on both economic and social impact. The Henley Centre report was based on an attempt to predict the future based on current gambling trends – an extremely difficult undertaking at the best of times, and especially so in terms of a potentially volatile gambling market.

5.77 To calculate figures for problem gambling, the Henley Centre report used econometric analysis, as well as a small survey. While the survey was criticised in the DCMS report as being too small to generate significant findings, the former approach was criticised for failing to take a number of factors into account, including the regulatory regime that would be established to control problem gambling. Although the DCMS review found “little evidence of a significant bias in the report in interests of BACTA”, it concluded that “the forecasts of problem gambling are open to serious question” (Farrell 2004, 14). Ultimately, it found that the findings of the study overall were not sufficiently robust to inform policy (Farrell 2004: 8).

5.78 The Hall Aitken report explicitly adopted the Henley Centre's methodology, and estimated that numbers of problem gamblers in Glasgow would increase to 25,392 by 2010, at a cost of £222,459,000. It concluded that the economic impacts of regional casinos would not be as beneficial as predicted, and would not produce significant numbers of extra jobs or regeneration for areas that introduced them. Many international studies have noted the exaggerated claims made for regeneration

through casino development and, although this area is outwith the remit of the current report, it appears that Hall Aitken's assessment of the limited positive economic impact of casinos is broadly in line with much of the international evidence.

5.79 However, its calculations of the social costs are less accurate. The Hall Aitken report used the Henley figures to calculate the increase in the number of problem gamblers in various regions. So, it assumed that problem gambling would increase by 38% nationally, and combined this figure with the (highest) estimate of problem gambling provided by the British Prevalence Survey. It then mapped this onto the population within a fifty mile radius of Glasgow, to arrive at a figure of 25,392 problem gamblers.

5.80 These calculations are based on a number of assumptions, which are open to criticism. First, the foundation of the exercise – the Henley Centre estimate itself – has been criticised, as was outlined above.

5.81 Furthermore, the Report's attempt to calculate the number of problem gamblers in Scotland is probably inaccurate. Simply mapping the Prevalence Survey rate onto the local population is not enough, since a range of factors influence rates of problem gambling and are likely to vary by region. However the reports' authors did not consider factors which affect the distribution of problem gambling, such as socio-demographic status, but rather assumed that everyone is equally at risk. This is not the case, and the distribution of problem gambling depends on more than straightforward distance from a gambling venue, as we have seen. Nor do they consider factors which militate against the development of problem gambling, and which may reduce the numbers affected.

5.82 In addition, the calculations are based on the assumption that casinos account for *all* problem gambling, both nationally and in the region. Although levels of problem gambling associated with casinos are high, international evidence shows that other forms of gambling, such as race betting and electronic machines, are higher.

5.83 Finally, having come to this estimate of the number of problem gamblers in Glasgow, the report then attempts to estimate the costs associated with these numbers. At this point, it utilises data from work by Earl Grinols (1995), an economist who has also been criticised for his methodological approach which generally produces estimates of social costs that are considerably higher than those of other researchers. A recent study of the costs of problem gambling in Indiana (2006) utilised the same Grinols work that the Hall Aitken study relied on, and was strongly criticised for "relying heavily on the work of one researcher whose work is controversial and is in almost complete isolation from other relevant published work. As a result the [report] likely overestimates the costs of casinos in Indiana" (Walker 2006: 2)¹¹.

¹¹ In addition, the Indiana study also utilised estimates by the National Opinion Research Centre [NORC] (which has conducted analyses for the U.S. National Gambling Commission). The estimates of social costs based on Grinols' methodologies were approximately double those calculated by NORC.

5.84 Similar criticisms could be levelled at the Hall Aitken study, whose figures are based on estimates of both future numbers of problem gamblers as well as the costs they will incur, effectively involving an estimate of an estimate.

5.85 Finally, as we have seen, the international evidence which the report quotes is far less unequivocal than is implied: there are many studies which contradict the ones cited, and much disagreement over the interpretation and applicability of results.

5.86 Even when the total numbers of problem gamblers *are* known, as is the case in Australia and America, the reluctance of these countries' two major studies to assign financial values to the net costs of gambling sounds a cautionary note as to the speculative nature of attempts to quantify the costs and benefits of gambling.

5.87 The NRC concluded that:

“while gambling appears to have net economic benefits for economically depressed communities, the available data are insufficient to determine with accuracy the overall costs and benefits of legal gambling.... [P]ervasive methodological problems in almost all existing studies prevent firm conclusions about the social and economic effects of gambling on individuals, families, businesses and communities generally” (NGISC 1999, 7-12).

5.88 None of this should be taken to imply that attempts to quantify or otherwise calculate the social costs of gambling should *not* be undertaken – indeed they should, and this is vital to furthering understanding as a matter of public interest. It simply means that to date, international attempts to do so have not been entirely successful, and have thrown up almost as many questions as they have answered.

Risk Factors, Social Deprivation and Impacts on Vulnerable Groups

5.89 The tendency of much research to focus on the rather narrow category of ‘pathological’ or compulsive gamblers means that studies of the wider effect of gambling on communities, and particularly socio-economically disadvantaged communities, have been relatively rare. However, when taken individually, many studies find that many of the indices of social deprivation, such as low income, unemployment, poor health, housing and educational qualifications are highly correlated with problem gambling.

5.90 There is considerable evidence that disadvantaged social groups are most likely to suffer the adverse consequences of increased gambling. Those who experience poverty, unemployment, dependence on welfare, homelessness, low levels of education and household income have higher rates of problem gambling than the general population (Volberg 1994; Cox et al 2000; Shaffer al 2002; Lepage 2000).

5.91 Within these groups, those who are male, single and/or under thirty five years of age are also more likely to be at risk from developing problems with their

gambling. This is true despite the fact that these groups may not spend more on gambling in absolute term. They do however; spend a higher proportion of their income than wealthier players (NRC 1999, Sproston et al 2000).

5.92 The results of the Prevalence Survey showed a significant correlation of problem gambling with household income, with those in the lowest income categories nearly three times as likely as the average to be defined as a problem gambler¹². Those not in paid work and those in manual occupations were also significantly more likely to be problem gamblers (Sproston et al 2000).

5.93 A large amount of international research has found that problem gamblers tend to be concentrated among those lacking college education, and who have dropped out of high school (Shaffer et al 1994; Abbott et al 2004). In Britain too, several studies have demonstrated correlations between higher spending on gambling and lower levels of education (Coups et al 1998; Rogers and Webley 2001; Shepherd et al 1998; Fitzherbert et al 1996)¹³.

5.94 Other factors relating to problem gambling are age and familial problem playing, so that the younger an individual begins gambling, and the higher the incidence of family members who experience problems, the more likely the development of problem behaviour.

5.95 In addition, problem gamblers are more likely than non-problem players to report heavy and/or problematic levels of consumption of drugs, alcohol and cigarettes. (NRC 1999).

5.96 It has been noted by many researchers that drinking, gambling and smoking tend to 'go together' in a triad of complementary behaviour, with one reinforcing and perhaps increasing the other (e.g. Room 2005). A report commissioned by a major gambling industry company noted that 'smoking is a powerful reinforcement for the trance-inducing rituals associated with gambling', and that 'winning is associated with having a cigarette or having a drink' (as, it should be noted, is losing) (Harper 2003).

5.97 In Australia, smokers have been found to spend approximately twice as much as non-smokers on EGMs, and when the state of Victoria outlawed smoking in such venues, revenue from gambling initially plummeted by 30%. The size of the loss is probably attributable to the fact that the bulk of this revenue comes from problem gamblers, who are also likely to be smokers, and so would be hardest hit by the ban.

¹² Scores for problem gambling increased as income declined, from 0.2% or 0.3% as calculated by SOGS and DSM-IV respectively, for households earning more than £32,000 per year, to 1.5% and 1.0% for those earning less than £15,000 per year.

¹³ The exception to this appears to be casino gambling. The British prevalence study a slight correlation between casino table games and higher levels of educational attainment, indicating again the slightly different demographic status of casino gamblers. (Sproston, Erens & Orford 2000). Numbers were too small to determine relations between problematic casino playing and education, however.

5.98 As the owners of gambling venues introduced various strategies to combat the ban (such as smoking zones), takings increased gradually. Nevertheless, the overall loss of revenue for the entire year was estimated to be around 12% (Harper 2003). In the Burswood casino in Perth, a no smoking policy introduced in 2001 had a significant impact on turnover (SA Centre for Economic Studies 2005).

5.99 The correlation with smoking is particularly interesting in the light of new legislation that bans smoking in all public places in Scotland. This move could have interesting implications for gambling habits, and could possibly act to deter those individuals who would be at risk from developing problems from visiting casinos in the first place.

5.100 Analysing income relative to expenditure on gambling is perhaps the most useful way to gauge the relationship between gambling on socio-economic deprivation. Despite the emphasis on psychiatric criteria in the diagnostic screens, for many gamblers, 'problem' behaviour is defined in more straightforward economic terms, as playing that they can no longer afford.

5.101 The Productivity Commission noted that a crucial aspect of the impact of problem gambling is the extent to which it represents a large or small share of total income. It found the ratios of gambling expenditures to incomes very high among problem gambling households. Gambling losses averaged around 20% of household income for problem players, compared with only 1% for recreational players. (PC 7.47). For three quarters of problem gamblers receiving counselling, expenditure exceeded 20% of income. In addition, levels of debt for such individuals are high: in Britain, it averages £28,000. Figures in Australia are around AU\$ 17,000 and in the U.S. just under \$40,000 (Gamcare 2003, PC 1999, Lorenz et al 1999).

5.102 A South African study found that the average player earned less than R2500 per month and spent more than 10% of their income on gambling. One in seven borrowed money to gamble, and one in four gambled with money normally used for household purposes. They concluded from this that, ultimately "gambling ...exacerbates poverty" (ESSET 2002)

5.103 In Britain, some recent studies of gambling on the National Lottery have found correlations between excessive expenditure, low income, and sometimes also problem gambling. One report found that although the highest income households spent most on the Lottery in absolute terms, it was the lowest earning households who spent the most relative to income.

5.104 While the proportion of households earning less than £200 per week spent 3.2% of their income on gambling, those earning more than £400 per week spent only 0.3% (Grun and McKeigue 2000). Other studies have found that increased spending on the National Lottery was associated with lower social class position as well as poorer social functioning and lower social support (Reid et al 1999; Fitzherbert et al 1996).

5.105 A relationship between the distribution of problem gambling and geographical distribution of social deprivation has been found in several studies. Research from Australia has found much higher concentrations of EGMs in low

income areas, while American researchers have noted that lottery outlets are more common in poor neighbourhoods. (Clotfelter and Cook 1991; NGISC 1999).

5.106 In a survey of EGMs in Victoria, Australia, Livingstone (2001) found significant associations between density of machines and expenditure and indices of socio-economic deprivation. He found that the greater the socio-economic disadvantage of a municipality, the higher the number of machines, with residents of the most deprived area in the region spending almost double the state's average on them.

5.107 In one of the few U.S. studies to examine disadvantage and gambling behaviour, Welte et al. (2004) mapped expenditure and problem gambling onto neighbourhood characteristics and availability of gambling. They defined disadvantage as the percentage of persons below the federally-defined poverty line, the unemployment rate, the percentage of households headed by a female and the percentage of families on welfare. They then interviewed almost 3,000 households about their gambling on nearby casinos, racetracks and card rooms.

5.108 Results of this study showed that problem and pathological gambling were strongly associated with neighbourhood disadvantage: for every increase of one standard deviation in neighbourhood disadvantage, the odds of being a pathological gambler increased by 69%¹⁴. In addition, a casino within ten miles of a respondent's home was found to be associated with a 90% increase in the odds of being a pathological or problem gambler. Rates of pathological or problem gambling were over twice as high among those who lived within ten miles of a casino in comparison with those who lived further away (7.2% vs. 3.1%).

5.109 These kinds of relationships have led many commentators to describe various forms of gambling as a regressive form of taxation, whereby those with the lowest incomes spend proportionally far more than those on higher incomes (Clotfelter and Cook 1991).

5.110 A few studies have shown that these relationships between socio-economic status, education and problem gambling in general also hold for the specific case of casino gambling. Although individuals on lower incomes and with lower levels of education are actually *less* likely to visit casinos, when they do they tend to experience more problems with their playing there.

5.111 Surveys of North America and Britain have found that casino patrons tend to be slightly better educated than the general population and more likely to hold white collar jobs. They also tend to be older: 30% of those between 51-65 had gambled in casinos in 2003, compared with only 25% of those under 50 (Sproston et al 1999; Baxandall and Sacerdote 2005).

¹⁴ The researchers noted that a 'clustering effect' existed and appeared to be based on the fact that the social groups that problem gamblers come from - disproportionately poor and ethnic minorities - also tend to reside in the same neighbourhoods. However, they also controlled statistically for socio-economic status, which meant that the effects of 'neighbourhood disadvantage' could be viewed as a separate variable.

5.112 However, other studies have found that, although lower income Americans gamble less often in casinos, when they do they bet more heavily. For example, a national survey in 1999-2000 created an index of socio-economic status that weighted measures of income, education and occupational status. It found that a third of people in the highest quintile group participated in past year casino gambling, compared to only 17% of those in the lowest quintile.

5.113 However, individuals in the lowest quintile group gambled twice as heavily in absolute terms as those in the highest group in absolute terms. It also found a similar relationship between blacks and Hispanics with whites: while the former played slightly less often, when they did, they gambled far more heavily (Welte et al 2002)

5.114 In Britain, the 1996 casino study suggested that two distinct demographic groups who experience problems with casino gambling: young, single unemployed males whose primary form or forms of gambling are outwith the casino but who, as it were, 'bring their problems in' with them when they visit, and an older group of retired males who were also single and more likely to be Chinese-Asian, and whose problematic behaviour was predominantly confined to casinos. Further, severe problem casino gamblers were also twice as likely to smoke as others, and twice as many had worried about their levels of alcohol consumption (Fisher 1996).

5.115 Little research has been conducted on the extent, or the ways in which, gambling and problem gambling exacerbates deprivation. However, it seems safe to assume that any activity that increases financial problems among these groups, who are already poor, can only have a negative effect on overall well-being.

Emerging Trends in Gambling Participation

5.116 International research is starting to show the emergence of new trends in the distribution of problem gambling throughout the population. The most striking of these is increases numbers of women reporting problems, which has been described as a 'feminisation' of problem gambling. This may be associated with the increased popularity of machine gambling, and the increased acceptability of female gambling in general.

5.117 Although prevalence is higher among males in countries such as Great Britain, and Sweden, in others, such as Australia, New Zealand and some parts of Canada and the United States, the differences are decreasing. The change appears to be associated with the growing availability and popularity of EGMs, which are played by equal numbers of males and females (Abbott, 2001; PC 1999; Volberg, 2003). It appears that as electronic machines become more widely available, the gender gap in the prevalence of problem gambling is closing. In summing up this trend, the Productivity Commission concluded:

"liberalisation of gaming machines led to a whole new group of female problem gamblers. It is hard to think of any other process which could explain the formation of this group, other than the availability of machines. The Commission considers this the most powerful evidence in

favour of a connection between problem gambling and the availability of gaming machines” (1999: 8.22).

5.118 Another trend relates to the increasing numbers of relatively affluent people who appear to be developing problems with gambling. In the earliest surveys of problem gambling, the annual household income of problem players was significantly lower than non-problem players.

5.119 However, a number of more recent surveys seem to be pointing to something of an ‘evening out’, where the average income of problem players is not significantly different from that of non-problem players. It has been suggested that factors such as the increasing normalisation of gambling and the increasing availability of credit, have encouraged gambling among greater numbers of middle class people, who are developing difficulties with their behaviour (Rosecrance 1988).

5.120 It was noted in the previous section that ethnic minority groups appear to be at particular risk of developing gambling problems. In addition, recent migrants from countries where legal gambling is not widely available also appear to have higher rates of problems. For example, the Productivity Commission survey found higher rates of problem gambling among people who did not speak English at home, while a study of Nevada found that adults who had lived in the country for less than ten years had more problems than longer-term residents (Volberg 2002; PC 1999).

5.121 It has been suggested that these findings are consistent with the view that exposure to gambling contributes to the development of gambling problems, and also that this effect reduces over time; i.e. that over time exposed populations or sub-groups adapt (Abbott 2001; Abbott & Volberg 2000).

5.122 The numbers of ethnic minorities in the British Gambling Prevalence Survey were too low to draw conclusions about rates of participation or problematic play among ethnic minority groups, although the large scale casino study referred to frequently throughout this report found that Chinese-Asian gamblers were three times as likely as white regular casino visitors to have gambling problems (Fisher 1996).

5.123 Finally, other groups who have higher rates of problem gambling include casino employees, who have high levels of exposure (Shaffer et al 1999), and students. A meta-analysis of gambling among students found rates of gambling that were much higher than the general population, at 5.6% (Shaffer and Hall 2001). Youths are also particularly vulnerable to developing gambling problems, particularly those associated with machine betting, and many researchers have found much higher rates among them than in the general population. However, age restrictions in the U.K. prevent those under 18 from visiting casinos, and so the specific problems that can be associated with adolescents are not relevant for this report.

Conclusions

5.124 Research has found that proximity to casinos increases rates of problem gambling in the local population. Some studies have found that the location of a casino within 50 miles of an individual's home can double the prevalence of problem gambling, although other work also suggests that the provision of specialist problem gambling services and public health initiatives can militate against such increases.

5.125 Disadvantaged social groups who experience poverty, unemployment, dependence on welfare, homelessness, low levels of education and household income are most likely to suffer the adverse consequences of increased gambling. And, although those on lower incomes and with lower levels of education are *less* likely to visit casinos than the general population, when they do they tend to experience more problems with their playing.

5.126 Casinos do not appear to increase *per capita* crime, although *total* crime in a neighbourhood may increase. This seems to be an effect of population growth: casinos tend attract large numbers of visitors to an area, and casino-jurisdictions can also experience population growth, increasing the overall population who can commit or fall victim to crime. This effect appears to be concentrated on specific types of crime, such as burglary, and does not seem to affect violent crime and most street crimes.

5.127 Fear of crime does not appear to increase in communities that introduce casinos, and may actually decrease due to the presence of casinos' own security measures and the development of run-down areas. Some studies have found that casinos are associated with increased cases of bankruptcy, although it has been difficult to establish whether they were the cause of such impacts.

5.128 A large scale survey of the impacts of casinos on crime and quality of life reached the following assessment of their overall social effects:

“casinos do not affect all communities in a simple, similar or nonvariant fashion. The evidence suggests that casinos appear to be neither as good for a community as supporters contend, nor as negative as opponents argue” (Stitt 2001: ii).

CHAPTER SIX RESPONSIBLE GAMBLING POLICIES

6.1 In Chapter Four, we saw how problem gambling in New Zealand, Australia and some states in the U.S. appeared to have been reduced through the implementation of various public health and treatment strategies. In this Chapter, we turn to look at such strategies in more detail. In particular, the material discussed here will provide a review of the public health approach to problem gambling and an outline of the development of responsible gambling strategies that have been utilised internationally to combat the incidence of gambling problems.

Public Health and Harm Reduction

6.2 In recent years, problem gambling has increasingly come to be seen as a public health issue, and a variety of policies and strategies have been developed to deal with it. Such strategies operate primarily at a local level, and often involve a range of stakeholders, including government, treatment agencies, local community groups, academic researchers and the gambling industry itself.

6.3 This public health perspective lends itself to policies designed to prevent and/or reduce the adverse social, economic and health consequences of gambling for individuals, communities and society, which are generally categorised under the umbrella term of ‘harm reduction’. This approach is favoured more in Australasia, Canada and Europe than in the U.S., which tends to favour policies based on abstinence. Even in the U.S. however, attempts to prevent harm among the population are undertaken by various stakeholders.

6.4 In Australia, the Productivity Commission highlighted the importance of ‘informed consent’ as a key principle of harm reduction, and noted a “lack of basic information about the price and nature of some gambling products, let alone the dangers from ‘excessive consumption’” (PC 1999, 39).

6.5 Unlike other products, gamblers often do not know the true cost or ‘price’ of the product they are buying. Many players have little practical understanding of, for example, the return on a slot machine, or the likelihood of a payout on a roulette wheel, taking into account all previous stakes and losses. Although EGMs may provide mathematical information on payout ratios, they provide little advice about actual spending rates: ie what it would actually take to win a certain amount of money. In this respect, the Commission recommended the provision of meaningful price information to consumers, such as the fact, that, for example, on certain machines, the chances of hitting the jackpot are only one in ten million – less than winning the Australian lottery.

6.6 Better information about odds and costs of gambling could also help reduce some of the false perceptions that underlie problem gambling, such as, for example, the idea that the outcomes of games of chance can be influenced by the player, and the idea that a win becomes more likely after an increasingly long string of losses. Such basic, but vital, information, is lacking in most casinos. However, the provision of it could improve decision-making in consumers, and prevent the

development of habits and attitudes that lead to gambling problems. The Commission pointed out that this could be done easily by providing pamphlets and signs in casinos, in a similar fashion to the ways that materials explaining the rules of games are distributed.

6.7 They also emphasised the importance of distributing ‘health (or wealth) warnings’ regarding gambling, similar to the public health messages for other forms of consumption, such as drinking or smoking. It stressed that these messages needed to be disseminated amongst the general public, not simply within gambling venues, and needed to be far more direct than current messages, which the Commission noted were much less explicit than the health warnings for other products. As an example, they compared warnings for gambling with those for other areas of public health, and these are highlighted below.

Health (and wealth) warnings compared

Used in other areas of public health

Speed kills

Hot water burns like fire

A Road Safety Campaign TV ad shows a weeping man who has run over a child while drunk

Australian National Tobacco TV ad shows pictures of blackened lungs and a damaged heart oozing yellow fluids

Gambling warnings

Have fun, but play it safe (Tattershall’s)

Bet with your head, not above it (Star City Casino)

Responsible Gambling TV ad shows a group of quirky people having fun gambling, ending with the slogan, ‘if it’s no longer fun, walk away’

If you play with real dollars, play with real sense (awarded best slogan, American Gaming Association)

Source: Productivity Commission (1999: 44)

6.8 It should be noted that even mild warnings about gambling such as these do not exist in Scotland or in the rest of Britain.

6.9 The location of cash and credit machines was also highlighted as an area of policy concern. Problem gamblers are more likely to withdraw more money than they intended if an ATM is located near where they are playing. In this sense, restrictions on ATM location and targeted withdrawal limits were highlighted as some of the most important issues for effective harm minimisation. The Commission also noted the use of exclusion policies, as well as the modification of game features and design, should be utilised in preventing the development of gambling problems.

6.10 Collectively, implementing these basic principles of consumer protection should make a significant contribution to ameliorating social costs associated with excessive gambling.

Responsible Gambling Policies

6.11 In this section the few explicit attempts that have been made at government level to formulate responsible gambling policies will be considered. The range of stakeholders who are involved in this process will also be noted, including, for example, government, industry, treatment providers and local voluntary organisations, before some of the specific initiatives they are engaged in are reviewed. To begin with, however, it should be noted that such policies vary quite significantly across different jurisdictions, and are generally most advanced in Australia and Canada.

6.12 Despite broad agreement over the general need to reduce the potential harms of gambling, common strategies and principles have not yet been formulated, and so the approach to date is somewhat piecemeal, with different states and governments utilising different strategies and policy frameworks.

6.13 Since the 1990s, governments have increasingly begun to require various sections of the gambling industry to address problem gambling, whether by instituting ‘responsible gambling’ measures, and/or by contributing a percentage of their revenues to provide funds for the treatment of problem gambling.

6.14 In addition, a growing number of gambling operators – most notably, the casino industry – have begun to develop ‘responsible gaming’ guidelines, policies and procedures themselves. Given that parts of the industry are (at least partly) owned and regulated by government, such as lotteries and, in Canada, casinos, it can sometimes be difficult to differentiate between industry and government-led initiatives here. In addition, there exists some variation in whether these initiatives are mandated or voluntary.

6.15 In the U.S. there are examples of mandatory initiatives where states have required lotteries to print helpline numbers on tickets and develop ‘point of sale’ materials about problem gambling to be posted in lottery retail outlets. In several U.S.. jurisdictions, a portion of lottery revenue or advertising budget must be channelled into problem gambling services.

6.16 Elsewhere in the U.S., gaming operators have been required to take active steps towards raising awareness of problem gambling among players and industry employees. This has been applied particularly to casinos in Mississippi and Nevada, which have been required to post helpline numbers and brochures around their properties and to provide staff with training about problem gambling (Palermo, 1999).

6.17 In Australia, the New South Wales Government passed the Gambling Legislation Amendment (Responsible Gambling) Act in 1999, which included a range of initiatives intended to minimise harms of EGMs in the state. It required clubs to provide information on counselling services and self-exclusion programmes, limit cheque cashing and cash payment of prizes, locate ATMs away from gaming machine areas, limit gambling-related advertising and provide training for staff in responsible gambling (Hing 2003).

6.18 In Manitoba, Canada, the state government has developed a long term strategy to address harm reduction. It is working with the Manitoba Lotteries Corporation (MLC), which operates several casinos, as well as a lottery, in the province. Together they have developed a five-year “Responsible Gaming Strategic Plan” with three goals, including: (1) advocating responsible gambling through media, education and awareness campaigns, (2) reducing the potential for harm from gambling through a range of measures including casino advertising guidelines and the introduction of responsible gaming features on electronic gaming machines, and (3) promoting the availability of problem gambling services in the region. The state government and the MLC have established partnerships with the Manitoba Gaming Control Commission, Addictions Foundation of Manitoba and other stakeholders and have conducted an evaluation of its first public awareness advertising campaign (Olynik 2004).

6.19 Given the variation in implementation of responsible gambling policies and strategies, some researchers have noted that “there is a significant absence of credible research data on the effectiveness of specific interventions to guide and inform policy decision-making” (Blaszczynski 2001:7). In light of this, in Australia, a team of researchers recently outlined a set of principles that they argue should be used to guide industry operators, health service providers, community groups, consumers and governments in the adoption and implementation of responsible gambling initiatives (Blaszczynski et al 2004). This framework, known as the ‘Reno model’, consists of five principles:

1. The key stakeholders will commit to reducing the incidence and ultimately the prevalence of gambling-related harms
2. The key stakeholders will work collaboratively to inform and evaluate public policy aimed at reducing the incidence of gambling-related harms
3. Key stakeholders will identify short- and long-term priorities thereby establishing an action plan to address these priorities within a recognised time frame
4. Key stakeholders will use scientific research to guide the development of public policies. In addition, the gambling industry will use this research as a guide to the development of industry-based strategic policies that will reduce the incidence and prevalence of gambling-related harms
5. Once established, the action plan will be monitored and evaluated using scientific methods

Prevention Strategies

6.20 In recent years, a range of stakeholders have begun to develop a range of prevention efforts that can be divided into primary, secondary and tertiary strategies. While primary prevention is intended to prevent the development of problems, and is directed towards all sectors of the population, secondary is directed towards particular groups who are at risk from developing problems, such as specific groups of gamblers, and tertiary is focused on those who already display signs of a problem, usually involving treatment. Although provision is uneven, and research

on effectiveness relatively sparse, these are reviewed in the following sections of this chapter.

Primary Prevention

6.21 From a public health perspective, it makes sense to target the larger group of individuals who are not classed as full blown ‘problem’ or ‘pathological’ gamblers, but may be ‘at risk’ from developing the disorder. While this group represents a much larger proportion of the population than pathological gamblers alone, it is also likely that their behaviour can be more easily influenced by changes in social attitudes and public awareness (Castellani 2000; Shaffer et al 1999).

6.22 Preventing the development of problems among this group can save costs in the long term, since, across a range of behavioural / mental health disorders, severe problem gambling is one of the most difficult and expensive to treat. The most problematic players are unlikely to complete treatment and/or change their behaviour (Volberg 2006). Furthermore, as researchers have noted with regard to alcohol and drugs, it is the case that

“the preponderance of social costs in the general population results from individuals with low- and intermediate-level symptom patterns. As a result, small improvements among these individuals can result in greater overall improvements in public health than larger improvements among those with the most severe symptoms” (Shaffer, Hall & Vander Bilt 1999: 1373).

6.23 A range of policies and strategies have been developed to deal with this potentially larger group, the idea being that effective interventions at an early stage could help to reduce possible increases in problem gambling throughout the population, even when new forms of gambling are introduced.

Public Education

6.24 A range of primary prevention strategies exists, of which the most relevant is public education and information campaigns. Given that many gambling problems are related to not keeping to a limit on the amount of time or money spent playing, to believing that games can be controlled and that losses can be won back, there is scope to limit increases in the development of problematic behaviour by public education – especially when this can be targeted at groups who are known to be at risk.

6.25 Such strategies are conducted through, for example, local media, to warn individuals of the risks of excessive gambling and alert them to where to find help if they should need it. Research has shown that these measures can lead to increases in the awareness of services, in the number of calls to helplines and in the number of clients seeking help, especially when targeted at the groups most at risk from developing gambling problems.

6.26 In many cases, across the U.S., Canada and Australasia, the gambling industry has provided funding for public awareness campaigns directed at employees, customers and the general public. Partnerships between the industry and specialist non-governmental organisations as well as government health and social service agencies have benefited not only from this funding but also from the creative input of industry-oriented marketing and advertising agencies.

6.27 The largest and longest running problem gambling prevention programme is probably the community education campaign developed by the Victoria Department of Human Services, Australia. The programme began in 1995, and essentially 'brands' its problem gambling services to increase visibility and recognition throughout the state. It involves a state-wide media campaign, as well as a community education component conducted by local social service employees.

6.28 In 1995, it included a five-week multi-language radio, newspaper and billboard advertisement phase; in 1996, a 14-week television advertisement phase, and a 30-week radio and television advertisement phase between 1997 and 1998. Evaluations found dramatic increases in community awareness of support for problem gamblers, and immediate, sustained increases in the number of calls to the gambling helpline (Jackson et al. 2002). Subsequent campaigns have targeted specific groups, such as older men and younger people (Victoria Department of Human Services 2003).

6.29 In the U.S. and Canada, 'awareness weeks' are organised every year. These involve large scale campaigns that essentially run as week-long public information exercises. During the week, state governments focus public attention on the issue of responsible gambling and casinos distribute information to employees and customers, and run awareness-raising activities about underage and problem gambling and the importance of responsible gaming practices for employees.

6.30 In the U.S., one such scheme is organised by the American Gaming Association (AGA) while another is run by the National Council on Problem Gambling and the Association of State Problem Gambling Service Providers. The campaigns aim to educate the general public and medical professionals about the warning signs of problem gambling and to raise awareness about the help that is available both locally and nationally.

6.31 In Canada, a range of stakeholders including the Canadian Department of Health, Casino Nova Scotia, the Nova Scotia Gaming Corporation, and the Atlantic Lottery Corporation, organise Nova Scotia's awareness week. The organisations utilise a range of techniques, including advertising on local and national media, and distributing brochures and posters in selected sites throughout the community. All report increased awareness, attributed specifically to the campaigns (*Responsible Gaming Quarterly*, Winter 2003).

Gaming Venue Information Centres

6.32 Various gaming providers, particularly in casinos, provide information kiosks or centres on their premises. These provide advice on responsible gambling,

and can make referrals to specialist agencies if they feel a player's behaviour has become out of control.

6.33 For example, the Crown Casino Customer Support Centre in Melbourne is a facility inside the casino where players can obtain information and referrals as well as professional counselling and access to a self-exclusion programme (Crown Casino, 2004). Similar programmes exist in Canada, and some are complemented by specialist counsellors who provide general training sessions for customers on how gambling works and how to play safely. In some places, including many British casinos, cash dispensers are linked to telephone helplines and to STEP – Self Transaction Exclusion Program – a programme that blocks access to cash advances.

6.34 In Britain, the Gala group display the STEP phone number beside cash facilities in their casinos, and also display the number for GamCare, a national problem gambling helpline and advice agency at various points throughout the casino.

Secondary Prevention

6.36 Other prevention strategies exist, many of which are conducted jointly with casino operators and local authorities in 'responsible gambling programmes'. These include, for example, specialist training for gambling venue employees, voluntary exclusion policies whereby individuals can elect to have themselves banned from a casino, with staff then enforcing the decision and the development of 'responsible gambling features' which are designed to curb excessive play. In some cases, these strategies have been adopted voluntarily by casinos, while in others they have been mandated by government as strategies of consumer protection.

Exclusion programmes

6.37 A growing number of state governments have sanctioned voluntary exclusion programmes in which gamblers, or members of their family, request that they be banned from the gaming establishment, removed from its mailing list and sanctioned if they re-enter the premises. These operate in all of the Canadian provinces, several U.S. states, New Zealand and in some states in Australia, most notably Victoria. In addition, some European governments, particularly the Netherlands and Switzerland, have demanded that casinos operate a system of 'imposed exclusion', whereby players with problems are identified by casino staff and banned from entering the premises (Sani et al 2002; Sani 2003).

Staff awareness and training

6.38 The idea of 'host responsibility' that has been applied to the provision of alcohol in licensed premises is gradually being adapted to gambling. Specialised staff training programmes have been developed to allow staff to recognise the signs of problematic behaviour in customers, and enable them to take the necessary steps to intervene. These also include training to help employees recognise the risks of

developing gambling problems themselves, so countering the possible effects of their environment.

6.39 These industry-based programmes are often organised in conjunction with practitioners, and emphasise the importance for senior staff to be knowledgeable about, and have a working relationship with, treatment providers in their community. Staff training generally focuses on increasing understanding of problem gambling, identifying problematic behaviour in customers, increasing knowledge of resources for problem players and adopting strategies to assist those who show signs of problems. Increasingly, training in problem gambling prevention is being built into broader training and certification programmes for gaming management.

6.40 A recent initiative in Manitoba, for example, was designed with input from GA members. It aimed to increase understanding of problem gambling, identify the signs of problems in players, and develop ways of helping them, whether within the casino, or by referring them to counsellors (Smitheringale 2001). In the U.K., GamCare organises training seminars for gambling industry staff and provides certification for those who successfully complete the course.

Responsible Gambling Features

6.41 Finally, ‘responsible gambling features’ (RGFs) designed to curb excessive play have been adopted by many sectors of the gambling industry in some countries, and are increasingly being mandated by governments. RGFs are devices built into electronic gaming devices that are intended to reduce the likelihood of players losing control over their gambling. Features include reductions in the speed of games, the intervals between games and the size of bets, as well as automatic ‘cash-outs’ after a set period of playing time. Information about the amount of time and money a player has spent on a machine can also be programmed to pop up on the screen, along with messages about responsible play.

6.42 To date, the governments of the Australian state of New South Wales and the Canadian provinces of Manitoba, Nova Scotia and Québec have mandated the implementation of RGFs. In New South Wales, the 1999 Responsible Gambling Act explicitly stipulates the implementation of RGFs in machines in casinos and clubs throughout the state.

6.43 While research shows that it is desirable to limit the amounts of time and money spent gambling and to provide gamblers with information that will allow them to make informed decisions about their gambling involvement, it has not been established how effective these features are.

6.44 In the UK in 2003, a voluntary Code of Practice was adopted by the Association of British Bookmakers with respect to FOBTs. In the face of mounting criticism of the ‘addictive’ potential of these machines, the industry implemented a variety of features, such as maximum stakes and prizes, and minimum time interval between games. However, a recent survey has shown a three-fold increase in the use of these machines by problem gamblers in the year since the Code was introduced, casting doubt on the efficacy of these features (Europe Economics 2006).

Tertiary Prevention

6.45 A large number of programmes exist for the treatment of problem gambling worldwide. Given that this is one area which does have some representation in the U.K., only a brief outline of the general nature of this provision will be made here, before moving on to discuss the situation in this country.

International Provision

6.46 In general, treatment for problem gamblers problems consists of self-help and individual and group counselling in outpatient settings, and via telephone helplines. Services tend to be provided by addiction and/or mental health professionals who have received specialised training, and are delivered within larger addiction or mental health treatment programmes. It should be noted that the majority of individuals who experience gambling problems never seek treatment; of those who do, many do not complete their programmes; indeed severe problem gambling is difficult to treat successfully. All these factors point to the advantages of prevention as a primary mode of intervention.

Self help

6.47 The earliest and most well known treatment for problem gamblers is Gamblers Anonymous (G.A.), which now includes thousands of chapters around the world. It is modelled on Alcoholics Anonymous and, like this organisation, is not associated with any political organisation or institution, does not accept outside donations and does not engage in lobbying. A related organisation, GamAnon, is a fellowship for friends and families of problem gamblers.

Counselling

6.48 The most widely used technique for counselling is cognitive-behavioural therapy (CBT). Based on the social learning model of problem gambling, cognitive treatments attempt to re-educate problem and pathological gamblers to understand their irrational expectations about gambling as well as core beliefs about illusions of control (Ladouceur et al 1994). Cognitive treatment is usually supplemented with behavioural strategies including training in problem solving, social skills and self-control (Rugle et al,2001).

Telephone counseling

6.49 Telephone counselling, via free helplines, has become increasingly common, and is widely used across the U.S., Canada and Australasia. In Britain, the organisation also offers a helpline. It is often the first point of contact for those with gambling problems, is particularly effective in providing immediate help in a crisis, and is crucial in rural areas for those without access to land based services.

Brief interventions

6.50 Given that many gamblers do not attend regular counselling sessions, short, intensive treatments have been developed in order to maximize the impact of treatment. Single session consultations, for example, last approximately two hours, and are believed to be effective for those with less severe problems who may be able to stop gambling with only minimal interventions (Jackson et al 2003).

Tertiary Strategies in Britain and Scotland

6.51 Compared with the international scene, Britain is marked by a severe shortage of treatment options for problem gamblers. In addition, it appears that few problem gamblers in this country ever actually seek help. The British prevalence study found that less than one in five of the problem gamblers surveyed had ever sought help, and whilst around half of the sample had heard of Gamblers Anonymous, other treatment providers including GamCare and GamAnon were virtually unknown (Sproston et al, 2000).

6.52 There are three main problem gambling service providers in Britain: GamCare, the national organisation for education, treatment and prevention of problem gambling; the self-help group Gamblers Anonymous, along with its sister organisation, GamAnon; and the residential facility of Gordon House. On top of this, a range of voluntary counselling agencies offer advice to individuals who present with other problems related to, for example, drug and alcohol consumption, and mental health and financial issues, and these may also include problem gamblers.

Gamblers Anonymous

6.53 Gamblers Anonymous is a self-help organisation run by, and for, problem gamblers. It was founded in the U.K. in 1962 and now organises meetings in approximately 150 locations, making it the largest and longest running provider of treatment for problem gamblers in the country. Its sister organisation, GamAnon, provides a similar service for those affected by problem gamblers. Both operate a 24-hour telephone helpline service and a website and organise weekly meetings staffed by volunteers, which provide advice and information for problem gamblers and the public. Appointed members with responsibility for prison liaison and public relations also exist in most regions.

6.54 Gamblers Anonymous has around 600 members in Scotland, with around 450 in Glasgow. There is anecdotal evidence of growing demand for new organisations in more rural areas, such as the Highland region (Rooney 2006: personal communication). Members with debt problems are referred to specialist organisations, such as Citizens Advice Bureaux or Money Advice Centres.

6.55 G.A. report that approximately a quarter of their membership suffers from problems with fruit machines and that this is frequently the only type of gambling with which they have any experience or problems. Membership is mainly male,

with women identified overwhelmingly with GamAnon. G.A. follows a 'twelve-step' approach, modelled on Alcoholics Anonymous, which is based on the premise that problem gambling is an incurable disease that can only be controlled through total abstinence from all forms of gambling activity.

6.56 GamAnon provides mutual support and encouragement for the friends and families of problem gamblers, although membership tends to be mainly wives.

The Gordon House Association

6.57 The Gordon House Association is the only dedicated residential facility for severe problem gamblers in the U.K. It has strong links with the judiciary, and often provides treatment and accommodation for problem gamblers on release from prison and/or who are homeless (Bellringer 1999).

6.58 The Association has 39 beds in residential programmes in Dudley and Beckenham, which are restricted to males only. In 2002, a four-bedroom house was established in Dudley for use by women. The treatment programme is based on high levels of support and intensive counselling during a nine-month period of residency. In addition to its residential programme, the Association operates a telephone counselling service, an outreach service and an internet counselling service.

GamCare

6.59 The organisation GamCare, which formed in 1997, has perhaps the highest profile of the U.K. treatment agencies and is actively involved in the provision of a range of services for problem gamblers as well as in raising public awareness of gambling and problem gambling in the U.K. The organisation runs a counselling telephone helpline which provides crisis intervention, information delivery and counselling for anyone affected by problem gambling. In addition, it provides a free counselling service from its London-based offices. The helpline receives around 30,000 calls each year, while during 2003, 1,351 counselling sessions were provided to 204 clients. Small scale evaluations appear to show that the services are effective in treating problem gamblers (GamCare 2004).

Service Provision in Scotland

6.60 As its London location limits access to the counselling service, GamCare has developed partnerships with voluntary organisations in the field of drug and alcohol counselling in order to expand provision for problem gamblers throughout the country. There are currently seven of these partners (known as the Breakeven Project) in the U.K. including The Renfrew Council on Alcohol (RCA Trust) in Scotland.

6.61 The RCA Trust is the only agency in Scotland that provides a dedicated counselling service for problem gamblers. Located in Paisley, it provides one-to-one counselling for gamblers, their partners and families as well as a telephone counselling helpline. The demographic profile of its clients is of young males,

whose predominant problem is horse race betting (McLaughlin 2006: personal communication).

6.62 The trust has seen numbers of clients with gambling-related problems rise steadily in the six years since it opened, although it should be noted that this is likely to reflect growing awareness of its services, rather than an increase in the absolute numbers of problem gamblers. In 2004, the RCA Trust introduced a residential facility, which currently has three clients who will live in supported accommodation for 9-12 months. The service is funded by local council benefits, and the Trust is currently seeking funding from Responsibility in Gambling Trust (RIGT) to expand it.

RCA Trust Client Numbers 2000 - 2005

Year	Clients	Appointments
2000-01	0	0
2001-02	2	12
2002-03	7	50
2003-04	31	126
2004-05	73	520

Source: RCA Trust

Barriers to treatment

6.63 Many discussions of effective treatment have focused on why some individuals do, and others do not, access help for their gambling problems. Responses have focused on factors such as stigma, shame and lack of information about the existence of help. However, another significant factor is access to services. Put simply, if treatment is not easily accessible, problem gamblers are less likely to attempt to seek help. A recent Canadian study found that problem gamblers living in close proximity to a major gambling venue were more likely to be in treatment if they were also close to a treatment program, and vice versa.

“The data suggest that if gambling venues expand in a given jurisdiction, careful consideration should be given to expanding treatment accessibility in equal proportion, and as close in proximity to the gambling venues as is feasible and practical” (Rush et al 2005).

Stakeholder Alliances

6.64 As will be evident from the preceding sections, a wide range of stakeholders are involved in both the provision of gambling products, the provision of treatment for gambling problems and the formation of policies to deal these issues. In addition, most countries have dedicated, formal organisations that oversee a range of gambling related strategies and projects.

6.65 For example, in South Africa, the National Responsible Gambling Programme coordinates efforts by relevant government agencies, including the Department of Social Services, the Department of Education, and the Department of

Finance to raise awareness of problem gambling at public events, such as health and school fairs.

6.66 In the U.S., the National Council on Problem Gambling engages in a variety of activities to raise public awareness of gambling issues, promote research, and encourage industry to adopt responsible gambling policies. These activities include operating a national helpline, sponsoring a specialist academic *Journal of Gambling Studies*, organising conferences and training events and administering a counsellor certification programme.

6.67 It also organises ‘speakers bureaus’, which are made up of professionals from the fields of medicine, mental health, education, public policy and industry as well as lay people with personal experience of gambling issues, to disseminate information about problem gambling through their various organisations. The programme is designed to reach out into the community with resources appropriate to different audiences including the media, businesses, professional organisations, community organisations, schools and institutions of higher education.

6.68 In New Zealand, the non-profit Problem Gambling Foundation which is primarily a problem gambling counselling service, also provides presentations and resources to health professionals including general practitioners, alcohol and drug workers and mental health workers, helping organisations, schools and law enforcement personnel. The Foundation’s ‘local government’ and health promotion teams work directly with community groups to mobilise interest in problem gambling issues, help organise action groups, and assist in presenting petitions and information to local governments.

Great Britain

6.69 In Britain, two organisations exist deal with the development of initiatives to address problem gambling, the Responsibility in Gambling Trust (RIGT) and GamCare

The Responsibility in Gambling Trust

6.70 The Trust was established in response to the recommendations of the independent Gambling Review Body (the Budd Report), commissioned by the government in 2001. Its main purpose is to raise awareness about problem gambling, commission education and treatment services, and to fund research into problem gambling for the U.K.. It funds the services provided by GamCare and the Gordon House Association, and has recently engaged with an academic research organisation (the Economic and Social Research Council) to fund a research programme on problem gambling.

6.71 The Trust itself is funded by a voluntary levy on the gambling industry, from which it hopes to receive some £3 million per annum. It also liaises with treatment providers, researchers, the Department for Culture, Media and Sport, the Gambling

Commission and various sectors of the gambling industry on a range of gambling-related issues.

GamCare

6.72 As well as providing treatment for problem gamblers, GamCare also attempts to raise public awareness of the social impact of excessive gambling. It has a number of strategies with which to undertake this, including the training of youth workers and industry representatives and the provision of educational materials.

6.73 GamCare is also engaged in raising awareness of problem gambling within the industry, developing codes of practice, training staff and designing certification of responsibility. In conjunction with the industry, GamCare distributes posters and leaflets in gambling-related venues throughout the country, such as in betting shops, which warn of the risks of excessive play, provide advice on responsible gambling techniques and debt management, display a check-list of danger signs and offer information about where to find help.

6.74 Despite these efforts, the impact of such strategies has not been evaluated, although it is clear from the prevalence study that awareness of GamCare itself is quite limited throughout the general population.

CHAPTER SEVEN CASINO-SPECIFIC FACTORS

7.1 Great care must be taken when drawing on the research evidence discussed in this report to consider the likely impacts of casino development in Scotland. To begin with, there are significant differences, in terms of cultural and political climate, between British and international casinos. In addition, significant variation between different types of casinos exists, as has been pointed out already in this report. Such factors mean that comparisons are not straightforward. More detailed consideration of these casino-specific issues is provided in the rest of this section.

Differences between British and International Casinos

7.2 British casinos have traditionally provided a very different kind of gambling experience to their counterparts in America, Australia, Canada, New Zealand and South Africa – in short, in every jurisdiction where the majority of research on casinos has been produced.

7.3 The current gambling climate in Britain was established by the 1968 Gambling Act, which effectively designated city-centre casinos as exclusive members-only clubs and limited the facilities within them. A membership requirement that meant individuals were only allowed entry after first applying for membership and then waiting first 48, later 24 hours for admittance; a semi-formal dress code and a generally patrician atmosphere meant that the venues were not attractive to large segments of the population.

7.4 Facilities offered within casinos were also limited by legislation restricting the number and types of games available, the provision of live entertainment and the consumption of alcohol (which was not allowed on the gaming floor). In addition, casinos were not allowed to advertise or promote their services in any way, and were not allowed to offer credit. Rules on numbers of machines meant that table games dominated the facilities offered in British casinos. It was only in 2005 that new legislation (which will be fully implemented in 2007), began to reduce these restrictions by increasing the number of jackpot machines allowed in casinos to 20 and abolishing the membership rule.

7.5 However, as a result of these restrictive policies, casinos have traditionally not been particularly popular in Britain, with only around 3% of the population visiting them (Sproston et al 2000). However, as the new legislation comes into effect, these numbers are likely to increase and it has been estimated that participation may reach around 10% (Pion Economics 2006).

7.6 In contrast, casinos elsewhere represent a far more commonplace form of leisure: in the U.S., around 27% of the population are regular visitors (Welte et al 2002). International casinos have traditionally been open to all, operating without dress codes and membership requirements and allowing free movement between drinking and gambling areas. In addition, they are dominated by electronic gambling machines, which account for around 70% of their turnover. These machines are particularly popular among women and, as was discussed in Chapter Five, have been associated with a ‘feminisation’ of problem gambling.

7.7 In addition, many casinos in America, Australia and Canada, are located in rural or 'site specific' settings, rather than urban ones which is typical of the British scene. Many Americans, Australians and Canadians expect and are willing to drive to casinos – or, indeed, to other forms of entertainment. In contrast, in Britain, which is more densely populated and where entertainment is more concentrated in urban venues, this 'culture of the car' is not as widespread, and public transport more commonly used in night-time leisure travel. In this sense, calculations about the effect of casinos in other countries that are based on a 50 mile / 30 minute drive zone may be less applicable in this country.

7.8 Not only this, the geographical location and resident demographic profile of many of the casinos which have been the focus of international research is quite different from the proposed Scottish casinos. In particular, many Canadian casinos are located in relatively rural communities, some of which are also tourist destinations for significant numbers of visitors, which is quite different to the situation in Scotland. For example, the broad area of the Central Belt, where the proposed casinos would be situated, is densely populated and also contains pockets of high deprivation.

7.9 Overall, it could be said that the culture of casino gambling has been quite different in Britain than elsewhere in the world. However, it is likely that this will change as the liberalisation of restrictions on casinos begins to attract greater numbers of younger and female players.

7.10 The quite considerable differences that exist between British and international casinos may mean that the findings from one do not map onto the other in straightforward ways. However, as the U.K. moves towards the model existing elsewhere international research is of increasing relevance.

Demographic Profile of Casino Gamblers

7.11 Discussions of gambling in general are often taken to include casino gambling. However, casino patrons have a slightly different demographic profile to other gamblers. The results from the British Prevalence survey show that casino gamblers have higher levels of income and education and are of a higher social class than other gamblers. Income was directly related to participation, with 7% of the highest income group playing table games, compared with only 1% in the lowest income group (Orford et al 2003). In fact, the survey found that casino gambling was the most popular form of gambling for individuals from the highest social class (professional occupations), and the least popular form for those from the lowest social class.

7.12 This is similar to the international evidence, which shows that casino gamblers are slightly better educated than other types and more likely to have white collar jobs. As mentioned in Chapter five, a survey of U.S. casinos found that a majority of patrons were also predominantly white, with similar percentages of males and females, and were slightly older than the general population, between 31-60 years old (NORC 1999; Baxandall and Sacerdote 2005).

7.13 The 1996 British casino study, which had a much larger sample of patrons, did not find income to be a particularly significant factor in the demographic profile of players. However, it did find that regular casino players made up a slightly different demographic group to those who did not gamble regularly, and had much higher rates of problematic play. Those who visited at least once a week were more likely than the others to be male, aged over 40, retired from work and separated from their partners. They were also much more likely to be non-Caucasian: a highly significant finding was that problem players were three times more likely than non-problem players to be of Asian-Chinese ethnicity.

7.14 As we saw in Chapter Four, this study suggested that there were two distinct groups who experienced problems with casino gambling. One was this core of older, single, retired and frequently Chinese men who visited regularly. The other was a group of single, younger unemployed males, aged 30 or under, who visited less regularly, and whose primary gambling activities were outwith the casino.

7.15 International studies have found similar correlations between heavy playing, ethnicity and low income. For example, although lower income Americans gamble less often in casinos, when they do, they bet more heavily. A national survey found that individuals in the lowest quintile group gambled twice as heavily as those in the highest group in absolute terms (i.e. not just relative to income), as did blacks and Hispanics compared with whites (Welte et al 2002).

7.16 Although the British research does not make the type of gambling explicit, it is likely that the individuals in these studies primarily play table games, as until now, EGMs have been extremely sparse in British casinos. However, internationally, females are beginning to experience increasing problems with machine gambling. In addition, many of these problems are found with the machines in casinos (O'Neil 2006). It is likely that the increased numbers of machines in British casinos will also see a rise of females experiencing problems here.

‘Locational Structure’

7.17 It has been pointed out already that casinos are not homogenous, but are distinguished by a range of factors, including, crucially size and geographical location, which can result in very different impacts.

7.18 Large resort casinos generally incorporate a range of leisure facilities such as restaurants, hotels and cinemas, as well as business and conference facilities, making them attractive destinations for tourists. In addition, they are often located in out-of-town areas, in ‘site-specific’ venues. In contrast, smaller casinos offer fewer facilities, with less potential for attracting tourists. These are often located in more urban or suburban environments, from where they draw a greater proportion of their customers.

7.19 People are generally more willing to travel to larger, resort-style casinos. A survey of visitors to U.S. casinos found that around 90% of visitors had travelled

more than 50 miles to the largest casinos, and 57% to the smaller ones (NORC 1999). Large casinos received around 15,000 visitors per day, smaller ones 5,000. Larger numbers of locals patronised the smaller venues. This clearly demonstrates that small casinos are patronised in greater numbers by locals, while larger ones attract more people from outwith the immediate area.

7.20 Bill Eadington has argued that the ‘locational structure’ of casinos is crucial in determining the ratio of overall social costs to economic benefits. He notes that the social costs of casinos tend to be exported to the areas where the gamblers who play them live, so that those which draw on large non-local markets tend to be associated with low social costs locally, and those which rely on locals as their primary customers are associated with high local social costs. Rural and destination, site specific casinos are therefore associated with the lowest social costs, since customers for those generally tend to come from beyond the casino’s own jurisdiction. However, urban or suburban casinos tend to draw large numbers of local residents to them, and so social costs remain within the community, where the gambling facilities themselves are located. As he puts it

“Jurisdictions that are able to become net exporters of gambling services – by attracting a high proportion of their customers from outside the region – will be able to generate considerably greater incremental local economic benefits than those jurisdictions whose casinos cater predominantly to local clientele. In a similar fashion, casino markets that cater primarily to tourists or other nonresidents will experience less visible negative social and political impact than those whose customers are their neighbours” (Eadington 1999: 188).

7.21 However, Eadington also notes that there is also an extent to which they may simply retain locals who would have travelled outwith the region to gamble anyway. In this scenario, social costs are no higher, since those individuals would have still ‘brought their problems back’ to the local community, as it were, as well as leaving the profits in a neighbouring jurisdiction (Eadington 1993).

7.22 It should be noted, of course, that this does not mean that some casinos are less likely to generate negative social impacts, such as problem gambling, than others. It simply means that regional casinos are more likely to disperse such impacts beyond the immediate region in which the casino itself is located. Any related costs would be transferred elsewhere – beyond the local area, the region, or even perhaps the country.

Transfer Effects

7.23 There is very little research on the impacts of casinos in neighbouring jurisdictions. However, the little that does exist is ambiguous. When casinos opened in Iowa, nine of the twelve counties adjacent to them reported increased bankruptcies (NGISC 1999). However, when problem gambling increased in Niagara after the opening of a casino, researchers found that problems remained within the city, and did not spread further throughout the province (Room et al 1999).

7.24 The size of a casino may be important here. If small casinos in urban areas are patronised by large numbers of locals, their impacts are likely to be concentrated and retained within the local area. However, larger casinos and/or casinos in rural areas which attract large numbers of visitors from non-local jurisdictions are likely to 'export' any negative impacts with their departing visitors.

7.25 Distance is also likely to be a factor. Most gamblers do not travel more than 50 miles to visit a casino. Of those who do, the casino tends not to be the main purpose of their visit. One of the few studies of casino patrons' travel behaviour found that individuals who travelled outwith their state to a neighbouring casino jurisdiction in the U.S. tended to be older, single people, whose casino visit was only an incidental part of a leisure trip (Hinch and Walker 2003). If this scenario were applicable to Scotland, it is unlikely that a casino development in England would attract many Scottish visitors who had travelled specifically to visit it.

Size and Games

7.26 In the current British context, issues of locational structure relate to the difference between regional, large and small casinos, which will provide quite different gambling environments. Regional casinos will be allowed up to 1250 Category A machines, offering unlimited prizes and accepting large stakes. It is not clear how many, or to what extent, the machine provision in these venues would be taken up by Fixed Odds Betting Terminals (FOBTs), which are associated with high risks of problem gambling, although it is almost certain that they would be offered. These very large resort or 'destination' casinos provide a range of facilities such as restaurants, bars, cinemas, shopping and entertainment, which create an entire leisure experience of which gambling may be only one aspect. They will intend to attract the majority of customers from outwith the local population, and will especially target large numbers of tourists.

7.27 Large casinos will be permitted up to 150 Category B machines with maximum jackpots of £4,000, and small casinos will have up to 80 Category B machines. All three will be allowed to offer betting, and Regional and Large will be allowed to offer bingo. Regional casinos would expect around 4,000 – 5,000 visitors per day; large 1,500 – 2,000 and small around 500 (Pion Economics 2006).

7.28 As noted earlier, electronic gambling machines [EGMs] are particularly associated with a range of risk factors for problem gambling, possessing high event frequency and opportunities for continual re-staking. A recent, unpublished survey by Mintel for the Association of British Bookmakers has revealed dramatic increases in the use of FOBTs by problem gamblers. The research examined patterns of gambling participation amongst betting shop visitors, and found that, between 2004 – 2005, the use of FOBTs among problem gamblers had escalated 12% to 40%. Given that FOBTs are likely to be introduced into casinos in the near future, this is a trend which should be watched closely (Europe Economics-Mintel 2006).

7.29 However, accessibility becomes an issue here, as the Australian experience of EGMs has shown. Among the major forms of gambling, gambling machines are frequently one of the most accessible, in that they can be widely dispersed in a range of locations which people may pass by in the course of their everyday activities.

7.30 Casinos can be the least accessible, in that many are situated in areas which individuals must travel to using some form of transport, whether in out of town locations (as is common internationally) or in urban centres (as is most often the case in the UK). The time and effort involved in making the series of decisions and transport arrangements that are required to actually to get to casinos tend to work against impulsive gambling. Although they typically have very large numbers of them, the machines that are located within these casinos are also, by definition, less accessible.

7.31 Many commentators have pointed to this relative lack of accessibility (compared with other forms of gambling) as a ‘protective factor’ working for casinos, meaning that they do not encourage impulsive gambling to the same extent as other, more accessible forms. At the same time, the Australian experience with EGMs that are located outwith casinos has been held up as an argument against convenience gambling.

7.32 While it is certainly true that the worst problem gambling is associated with machines which are widely dispersed throughout communities. However, this does not exonerate casinos, which are also associated with harms. The fact that widely dispersed machines pose the greatest risk does not mean that those in casinos pose *no* risk. Research clearly shows that these machines are associated with high rates of problem gambling wherever they are located, as are casino table games, which are unique to casinos themselves. Any potential ‘trade off’ between, on the one hand, large numbers of machines, and on the other, less accessible and relatively regulated locations, is likely to be complex and has not yet been adequately addressed by researchers.

7.33 To date, the best available evidence only shows that casinos located away from population centres are associated with the *least* negative social impacts relative to economic benefits for the surrounding area, and those in more densely populated urban areas, the highest ones.

CHAPTER EIGHT GAMBLING IN SCOTLAND

8.1 This chapter presents an analysis of new data from the British Gambling Prevalence Survey, conducted in 1999, to outline patterns of gambling participation in Scotland. It also uses information about patterns of deprivation to comment on likely geographic patterns of problem gambling in Scotland.

Participation in Gambling in Scotland

8.2 In 1999, the National Centre for Social Research conducted the first nationally representative survey of gambling in Britain. The aim of the survey was to provide baseline and prevalence data on adult gambling behaviour. In total, 7,680 people aged 16 and over participated in the survey, 84% of whom lived in England, 10% in Scotland and 6% in Wales.¹⁵ Respondents were selected at random, using the Postcode Address File (PAF), and data was gathered through face-to-face interview and self-completion questionnaires. Population estimates from the Office of National Statistics were used to weight the data to reflect the age and sex profile of the British population.

8.3 In this section, we look at the number of people living in Scotland who took part in gambling in the year prior to interview, and the number and type of gambling activities they engaged in. At the outset, however, two caveats should be noted. First, the data are over six years old and should not, therefore, be seen as a current picture of gambling participation in Scotland. Second, the Scottish sub-sample, although representative of the adult Scottish population, consists of just 745 cases.

8.4 While this is large enough to afford a reasonable degree of precision for results at the level of Scotland as a whole, the possibilities for more detailed sub-group analyses are limited. For example, analysis was run on participation in gambling by: marital status; employment status; social class; income; and highest educational qualification, but when statistical testing was performed the bases were too small to show any significant differences. Despite these caveats the 1999 survey remains the only data source of its kind (though a new Britain-wide prevalence study is to be carried out in 2006) and its broad findings are likely to remain relevant. Moreover, detailed sub-group analysis based on the sample as a whole (i.e. including respondents in Scotland, England and Wales) is likely to provide a reasonable basis for predicating patterns of gambling behaviour in Scotland.

How Many People Gamble in Scotland?

8.5 One of the main aims of the 1999 survey was to provide robust baseline information levels of participation in gambling. In order to measure this, respondents were shown a list of 11 gambling activities and asked whether they had participated in each activity in the preceding week and in the 12 months prior to interview. Respondents were not asked about their frequency of gambling – simply whether they had participated in the last year or week – in other words, the survey provides a measure of *prevalence* rather than *incidence* of gambling activity. It did,

¹⁵ The survey did not cover Northern Ireland.

however, record the number of different forms of gambling engaged in and it is likely that this is a reasonable proxy for extent of involvement.

8.6 Looking at the sample overall (table 8.1), seven out ten (72%) respondents said they had participated in one or more of these activities in the twelve months prior to interview. Table 8.1 also suggests that there was no significant difference in levels of participation in gambling (70% in Scotland compared with 73% in England and Wales).

What do People Gamble On?

8.7 Taking part in the National Lottery Draw was by far the most popular gambling activity, with 65% of all respondents saying they had purchased a National Lottery ticket within the past twelve months. Respondents were three times as likely to participate in the National Lottery Draw as in the next most popular activity, which was the purchase of scratchcards (including those sold by Camelot, the current organisers of the National Lottery) by 22% of the population. Again, there was no significant variation between Scotland and the rest of Britain.

8.8 The only significant differences – where Scottish respondents were less likely to bet than were those from England and Wales – were betting on horse or dog racing and private bets.

Table 8.1 Gambling activities in the year and week prior to interview

Gambling activity	Scotland		England & Wales		All	
	In the last week	In the last year	In the last week	In the last year	In the last week	In the last year
<i>All respondents</i>	%	%	%	%	%	%
National Lottery Draw	45	63	48	65	47	65
Another lottery	3	6	4	7	4	8
Scratchcards	9	23	8	22	8	22
Football pools	8	11	6	9	6	9
Bingo	5	6	4	8	4	7
Fruit machines	6	13	6	14	6	14
Horse races	3	11	3	14	3	13
Dog races	1	2	1	4	1	4
Betting with a bookmaker (other than on horse or dog races)	1	3	1	3	1	3
Table games in a casino	0	3	0	3	0	3
Private bets (e.g., with friends or colleagues)	4	9	4	12	4	11
Another gambling activity	-	-	0	-	0	-
Any gambling activity in past 12 months		70		73		72
Any gambling activity in last 7 days	52	-	53	-	53	-
<i>Bases (weighted):</i>	764	761	6935	6911	7699	7700
<i>Bases (unweighted):</i>	745	741	6935	6910	7680	7680

8.9 Although these data show no significant differences between Great Britain and Scotland as a whole, other research has found that gambling participation and expenditure in Scotland tends to be somewhat higher than the national average. For example, one survey found that one in ten of the population in Scotland – twice the national average – are frequent players of the lottery, football pools, bingo and betting shops (Mintel 2004). Others have found that Scots spend more on the Lottery than do players anywhere else in the country (Fitzherbert 1995; FES 1999).

Number of Activities Engaged in During Previous 12 Months

8.10 Turning now to the number of gambling activities people engaged in, the picture in Scotland is again very similar to the rest of Britain.

Table 8.2 Number of gambling activities engaged in during year prior to interview

Number of activities		Scotland		England and Wales		All
	In the last week	In the last year	In the last week	In the last year	In the last week	In the last year
<i>All respondents</i>	%	%	%	%	%	%
None	48	30	47	28	47	28
One	32	31	33	30	33	30
Two	13	19	13	19	13	19
Three	5	9	4	12	4	11
Four	1	4	1	6	1	5
Five	1	3	1	3	1	3
Six or more	1	3	0	3	0	3
Mean number of gambling activities in last year	-	1.5	-	1.6	-	1.6
<i>Bases (weighted):</i>	764	766	6935	6935	7699	7701
<i>Bases (unweighted):</i>	745	745	6935	6935	7680	7680

Who is Most Likely to Gamble in Scotland?

8.11 As noted earlier, the possibilities for detailed sub-group analyses are limited by the sample size in Scotland. Nevertheless, it is possible to offer some observations about variations in gambling behaviour by age group and sex. Table 8.3 looks at: the proportion of men and women who participated in each type of gambling activity in the twelve months prior to interview; the proportion who took part in any gambling activity; the number of activities; and the mean (average) number of activities.

8.12 A number of points are worth noting. In Scotland, there was no significant difference between the proportion of men (70%) and women (69%) who said they had taken part in at least one gambling activity during the year prior to interview. Interestingly, men in England and Wales *were* more likely than women to have taken part in at least one gambling activity (76% and 68% respectively). Scottish

men were also below the British figure for taking part in any gambling activity in the year prior to interview (70% compared with 76%).

8.13 Looking at the individual types of gambling activities, some gender differences are also apparent. For example, men were significantly more likely to gamble on football pools, fruit machines, horse or dog racing or take part in private bets than women, whereas women were more likely to play bingo than men. These patterns are very similar to those for the whole British sample.

8.14 But while, overall, men were no more likely than women to have gambled at all during the previous 12 months, men *were* more likely to have engaged in a greater number of gambling activities (1.7 compared with 1.3), and were twice as likely to have gambled on four or more activities (13% compared with 6%). The same pattern was found for the British sample as a whole.

Table 8.3 Type and number of gambling activities in the year prior to interview by sex (Scotland only)

	Sex		Total
	Male	Female	
<i>All respondents</i>	%	%	%
Type of gambling activity:			
National Lottery Draw	62	64	63
Another Lottery	7	5	6
Scratchcards	24	23	23
Football pools	17	5	11
Bingo	1	10	6
Fruit machines	18	9	13
Horse races	16	6	11
Dog races	4	1	2
Betting with a bookmaker (other than on horse or dog races)	5	2	3
Table games in casinos	4	2	3
Private bets (e.g. with friends or colleagues)	12	5	9
Any gambling activity in the past year	70	69	70
Number of gambling activities:			
None	30	31	31
One	27	35	31
Two	18	20	19
Three	12	7	9
Four	6	3	5
Five	2	2	2
Six or more	5	1	3
Mean number of gambling activities	1.7	1.3	1.5
<i>Bases (weighted)</i>	378	386	764
Bases (unweighted)	355	390	745

8.15 Looking at table 8.4 we can see that participation in gambling was also linked to age with those aged 35-54 being most likely to have taken part in any gambling activity in the year prior to interview (78% compared with 67% of 16-34 year-olds and 63% of those aged 55 or over). However when the average number of activities

are examined there is no distinction between the 16-34 and 35-54 age groups who both had a mean participation figure of 1.7.

8.16 There was also some evidence of variation by age in the type of gambling activity, with 35-54 years old more likely to participate in the National Lottery Draw (74% compared with 58% of 55+ age group and 55% of the 16-34 year olds). The younger age group were also more likely to gamble on scratch cards and fruit machines. These patterns are again consistent with those for Britain as a whole.

8.17 It can be seen that table games in a casino were played by only 3% of the population, in line with figures for the rest of the country, and that they were played disproportionately by males and those aged 16-34.

Table 8.4 Type and number of gambling activities in the year prior to interview by age (Scotland only)

	Age			Total
	16-34	35-54	55+	
All respondents	%	%	%	%
Type of gambling activity:				
National Lottery Draw	55	74	58	63
Another Lottery	5	9	3	6
Scratchcards	33	22	12	23
Football pools	11	12	9	11
Bingo	4	8	4	6
Fruit machines	23	12	3	13
Horse races	12	13	8	11
Dog races	2	4	1	2
Betting with a bookmaker (other than on horse or dog races)	5	2	1	3
Table games in casinos	5	3	1	3
Private bets (e.g. with friends or colleagues)	13	8	5	9
Any gambling activity in the past year	67	78	63	70
Number of gambling activities:				
None	33	23	37	31
One	25	34	36	31
Two	16	24	17	19
Three	12	9	6	9
Four	6	4	3	4
Five	3	3	1	3
Six or more	5	4	-	3
Mean number of gambling activities	1.7	1.7	1.1	1.5
Bases (weighted)	280	267	217	764
Bases (unweighted)	245	286	214	745

Note these percentages have not been compared with the British sample because the age categories have been combined to enable analysis.

Problem Gambling Prevalence

8.18 One of the key aims of the 1999 survey was to provide an estimate of the prevalence of problem gambling in Britain. In this section, we examine prevalence rates for Scotland and compare them with the British sample as a whole. The survey team used two screening tools to identify problem players: the South Oaks Gambling Screen (SOGS) and DSM-IV¹⁶. Both screens can be used to measure lifetime and current problem gambling behaviour.

8.19 Using the SOGS, 0.8% (63 cases) of the British sample as a whole were classified as problem gamblers. Similar findings were obtained using the DSM with 0.6% (44 cases) of the British sample identified as problem gamblers. For Scotland, the comparable figures were 1% (8 cases) and 0.7% (5 cases). *These do not represent statistically significant differences from the figures for Britain as a whole.*

8.20 Because of the very small number of cases, it is not possible to extrapolate further on the basis of the Scottish data. Given the very strong similarities between Scotland and the rest of the sample in terms of participation rates, however, it seems reasonable to assume that the key drivers of problem gambling in Scotland will be similar to those for Britain as a whole. Findings from the 1999 prevalence study concluded that, once others factors were controlled for, ‘problem gambling’ was associated with: being single and male; having a parent who was or had been a problem gambler; and being in the lowest income category.

8.21 As we saw in Chapter Five, international research has also suggested a link between problem gambling and living in areas of deprivation.

Casinos and Patterns of Deprivation in Scotland

8.22 Given this link between problem gambling and deprivation, it is advisable to look at levels of deprivation and other risk factors associated with problem gambling in Scotland in order to assess the likely impact of the introduction of new casinos. To recap: problem gambling is associated with particular indices of social deprivation, such as unemployment, low income and low levels of education and skills. In addition, individuals of Chinese ethnicity also have higher rates of problematic casino play than the general population.

8.23 Using data from the Scottish Index of Multiple Deprivation 2004 (SIMD)¹⁷, Labour Market Statistics (2006) and the 2001 Census, this section outlines the profile of the regions which have recently bid for casino licenses, and considers the likely social impact of casinos on the residents of these regions.

¹⁶ The 1999 survey study team developed and pre-tested their own DSM-IV based screen. The 1999 prevalence study team also set their own threshold score on each measurement tool before analysis of the data (the main reason for this focused on findings from the literature review which criticised the SOGS cut off as being too low). The cut off adopted by the research team for SOGS was a score of 5 or more which is higher than the original SOGS threshold of 3 or 4. The cut off for the DSM-IV did not change.

¹⁷ Data downloaded from the Scottish Neighbourhood Statistics website <http://www.sns.gov.uk>

Table 8.5 SIMD Data

Local Authority (LA)	Total population	LA population in worst 15% of DZs	% of LA population in worst 15% of DZs	% of total Scottish population in worst 15% of DZs
Glasgow City	577869	310605	53.8	40.0
Inverclyde	84203	27560	32.7	3.6
Dundee City	145663	41499	28.5	5.3
West Dunbartonshire	93378	25324	27.1	3.3
North Lanarkshire	321067	79111	24.6	10.0
Renfrewshire	172867	33121	19.2	4.2
North Ayrshire	135817	25045	18.4	3.2
East Ayrshire	120235	21859	18.2	3.0
South Lanarkshire	302216	50107	16.6	6.5
Clackmannanshire	48077	7514	15.6	1.0
Edinburgh, City of	448624	49842	11.1	6.5
South Ayrshire	112097	9909	8.8	1.2
Argyll & Bute	91306	6738	7.4	0.7
Fife	349429	25438	7.3	3.4
Falkirk	145191	10323	7.1	1.2
Aberdeen City	212125	14298	6.7	1.7
Stirling	86212	4699	5.5	0.6
East Renfrewshire	89311	4466	5.0	0.5
West Lothian	158714	7523	4.7	0.8
Dumfries & Galloway	147765	6886	4.7	0.9
East Dunbartonshire	108243	3410	3.2	0.4
Highland	208914	6435	3.1	0.8
Angus	108400	2287	2.1	0.3
Perth & Kinross	134949	2308	1.7	0.3
Scottish Borders	106764	1644	1.5	0.2
Midlothian	80941	720	0.9	0.1
Aberdeenshire	226871	1497	0.7	0.2
TOTAL	4817248	708168		

Proposed Casino Locations

8.24 Glasgow City Council, West Dunbartonshire and Midlothian have bid for regional Casino licenses, while Renfrewshire, Falkirk and Dumfries and Galloway have bid for one of the eight large casino licenses that will be awarded.

8.25 The potential sites for the Glasgow casino are within the city itself. Two are along the Clyde waterfront: one at the Scottish Exhibition and Conference Centre (SECC) and one at the Glasgow Harbour development near Partick. The third is at Ibrox. The Midlothian site is south of Edinburgh, on the city bypass at Straiton. The West Dunbartonshire site is at Bowling, outside Glasgow, on a major motorway route to Loch Lomond.

8.26 The proposed site of the large casino in Renfrewshire is Paisley; in Dumfries and Galloway it is Stranraer; and in Falkirk it is the Falkirk Gateway site, an area earmarked for leisure and retail use.

8.27 At present, there are already twelve casinos in Scotland: one in Dundee, two in Aberdeen, four in Edinburgh and five in Glasgow. All are small by international standards.

Regional Characteristics

8.28 SIMD data are based on 6,505 Data Zones (DZs), which contain an average of 750 people. Each DZ is ranked according to its level of deprivation – the DZ ranked 1 is the most deprived and the DZ ranked 6505 is the least deprived.¹⁸ Table 8.5 presents SIMD data from the 15% of DZs ranked most deprived in Scotland. Councils applying for licenses are highlighted in bold. It should be noted that the City of Edinburgh has been included in this, as the Regional casino site proposed for Midlothian is within the catchment area of Edinburgh itself.

8.29 The most obvious point to note is that Glasgow City has by far the highest score of deprivation with over half (54%) of its population living in the 15% of most deprived data zones. Glasgow City also accounts for 40% of the population of Scotland who live in the worst 15% of DZs. West Dunbartonshire also has high deprivation scores, with 27% of its population living in the worst 15% DZs, while only 0.9% of the local authority population of Midlothian do so. However, the city of Edinburgh, which would be the catchment area for the Straiton casino, has 11% of its population living in the most deprived zones. Of the contenders for large casinos, Renfrewshire has the highest proportion of population in the most deprived DZs (19%), while Dumfries and Galloway has 5% and Falkirk has 7%.

8.30 It is worth noting that eight out of ten of the local authorities with the highest proportion of population in the 15% of most deprived DZs are in the West of Scotland. Of the ‘city’ authorities, Aberdeen and Edinburgh have the lowest proportion of population in the most deprived DZs.

8.31 In terms of income and employment, Glasgow has higher rates of unemployment than Scotland as a whole (5% compared with 3.3% at the time of writing), and a higher proportion of these are long term unemployed (17%

¹⁸ <http://www.scotland.gov.uk/library5/government/glsimd-00.asp>
<http://www.scotland.gov.uk/Publications/2005/09/2792129/21335>

compared with 13.4%¹⁹). Long term unemployment appears to be falling faster in the city than in the country as a whole however. Overall, a significantly lower proportion of people of working age is economically active than in Scotland as a whole (70% compared with 79%). Median earnings are 4% lower than the Scottish average (Labour Market Statistics April 2006).

8.32 The picture is similar in West Dunbartonshire, which has rates of unemployment comparable to Glasgow. Long term unemployment is slightly lower than in Glasgow (14%), although it is falling more slowly than the country as a whole. There are slightly lower numbers of people of working age who are economically active in the region than in Scotland as a whole (76%). Median earnings are 12% lower than elsewhere in Scotland.

8.33 Midlothian appears to have a more buoyant economy. The unemployment rate is lower than the Scottish average (2.4%), with low rates of long term unemployment (11%) which are also falling faster than the Scottish average. Significantly higher numbers of working age people are economically active than in Scotland as a whole (84%), although median earnings are still 11% lower than for the country overall. However, characteristics of the city of Edinburgh, which would be within the catchment area of the proposed casino, should also be taken into account. Unemployment in Edinburgh is around the Scottish national average, and though long term unemployment is similar (14%) it is rising considerably faster than in the country as a whole. A slightly higher proportion of the working age population is economically active and median earnings are 12% higher than the national average.

8.34 In Renfrewshire, unemployment is around the Scottish average, while long term unemployment is lower (11%) and is falling faster than in Scotland as a whole. The economic activity rate is only slightly lower than the Scottish average (78%), and median earnings are 6% higher than in the rest of the country.

8.35 In Falkirk, unemployment and long term unemployment (13%) are similar to the national average, although the latter is rising more quickly than in the rest of the country. Proportionately more people are economically active than in the country as a whole (80%), although median earnings are 4% lower.

8.36 In Dumfries and Galloway, although the unemployment rate is lower than the national average (3%). Though long term unemployment is similar (14%) it is rising faster. A higher proportion of people is economically active in the region (82%), and median earnings are 8% lower.

8.37 Although they make up a small proportion of the Scottish population overall, numbers of Chinese residents are highest in Glasgow and Edinburgh, where they comprise 0.7% and 0.8% of the cities' populations respectively. Total numbers are greater in Glasgow however (3876 compared with 3532). They make up 0.3% of the

¹⁹ N.B. Long term unemployment figures here are expressed as a percentage of the unemployed. This means that if the unemployment rate is lower, the number of long-term unemployed will be lower, even for a given long-term unemployment rate. Long-term unemployment is defined here as being out of work for over twelve months.

population of Renfrewshire, 0.2% of West Dunbartonshire and Dumfries and Galloway, and 0.1% of both Midlothian and Falkirk (Census 2001).

Potential Impacts of Casinos

8.38 From what we have seen of the international evidence, it appears that problem gambling is associated with individuals who experience multiple forms of deprivation, and particularly who are unemployed and/or on low incomes. Although it should be stressed that these groups are *not* the ones most likely to visit a casino, when they do, they are most risk from developing problems with their playing.

8.39 From the socio-economic profile of the proposed sites for casino development outlined above, it seems likely that some regions will have higher proportions of their population who may be at risk from developing gambling problems than others.

8.40 On the other hand, it is also the case that potential benefits – in terms of job creation and economic regeneration – are likely to be greatest in the areas of greatest deprivation. Research has shown that casinos can create full time, entry level jobs (unlike many other branches of the gambling industry) which are badly needed in communities suffering from unemployment and underemployment. Economic benefits tend to be concentrated within the immediate vicinity of gambling facilities themselves. In this sense, there is a case to be made for casinos providing local employment for people in deprived areas, especially in locations where individuals may be unable or unwilling to travel outwith the immediate area for work. However, the case for employment is not straightforward, as it is not certain how many of these new jobs would actually go to the local people who need them the most. The long term unemployed in particular may lack the skills required by the casino, especially in terms of the better paid ‘front of house’ jobs.

8.41 The following discussion will review the potential impacts of casinos, and highlight areas where the negative impacts of casinos could be greatest, first in terms of regional casinos, followed by large ones. Throughout, it will also outline the limitations of this exercise.

Proposed Regional Casinos

8.42 Regional casinos will be designed as resort or ‘destination’ venues providing a range of facilities such as restaurants, bars, cinemas, shopping and entertainment, which create an entire leisure experience, and of which gambling may be only one aspect. They will intend to attract the majority of their customers from outwith the local population, and will especially target large numbers of tourists. They will be allowed up to 1250 Category A machines, including FOBTs, offering unlimited prizes and accepting large stakes.

8.43 Table 8.6 presents some of characteristics known to be associated with problem gambling for the regional authorities that have applied for Regional casino licenses. It should be noted that again, details for Edinburgh have been included in

this, as the Regional casino site proposed for Midlothian is within the catchment area of Edinburgh itself.

8.45 Of the regions considered for these developments, Glasgow has the highest concentration of risk factors associated with problem gambling. It has the highest deprivation scores in the country, with over half of the population of the city living in the 15% of most deprived data zones. In addition, unemployment is high and economic activity and median income relatively low.

Table 8.6 Characteristics of authorities applying for Regional casino licenses

Indicator	Glasgow	West Dunbartonshire	Midlothian	Edinburgh	Scotland
% LA population in worst 15% DZs	53.8	27.1	0.9	11.1	-
Unemployment (%)	5.0	4.9	2.4	3.1	3.3
Long term unemployed (%)	17	14	10.7	14.2	13.4
% change in last year	- 7	- 1	- 11	+ 23	- 3
Economically active (%)	70	76	84	80	79
Weekly median Earnings (£)	396	364	366	462	411
Median earnings (% compared with population)	- 4	- 12	- 11	+ 12	-
Chinese residents (% LA population)	0.7	0.2	0.1	0.8	0.3

8.46 West Dunbartonshire also has high deprivation scores (27%), high levels of unemployment and low median incomes. As mentioned earlier, it is noteworthy that eight out of ten of the local authorities with the highest proportion of population in the 15% of most deprived DZs are clustered in the West of Scotland.

8.47 In terms of the three proposed sites for the Regional development, Midlothian has the lowest deprivation scores (0.9%) and low unemployment but also low median incomes. However, it must be remembered that the Midlothian casino proposal would serve the population of the city of Edinburgh which has a deprivation score of 11%.

8.48 The first thing to note is that all of the proposed casino sites, with the exception perhaps of Dumfries and Galloway, are within easy reach of areas of considerable deprivation, with Glasgow in particular possessing particularly high levels of deprivation. However, given that all of the proposed sites are close to pockets of high deprivation, and all are within 50 miles of each other, it is likely that the impacts of any one casino would be felt in surrounding regions.

8.49 In terms of the risk posed to ethnic groups, a casino development would probably have the greatest negative impact in Glasgow city and Midlothian. Compared to the country as a whole, there are relatively high numbers of Chinese people living in Glasgow, as well as in Edinburgh, the latter of which would be the local catchment for the Midlothian casino at Straiton. It should be stressed, however, that overall numbers are extremely small.

8.50 It should be noted that this ‘mapping exercise’ is an instance of applying a blunt tool to some complex issues, and the overall picture is complicated by a number of factors which need to be taken into account:

8.51 *Local market:*

- The real question is the extent to which these casinos actually attract local residents. The international evidence has suggested that those which draw on large non-local markets tend to have low social costs, and those who rely on locals as their primary customers have high ones relative to economic benefits. Urban or suburban casinos tend to draw large numbers of local residents to them, and so social costs remain within the community where the gambling facilities themselves are located. All of the proposed developments (with perhaps the exception of Dumfries and Galloway) could be considered urban or suburban casinos, although all will attempt to attract large numbers of visitors.
- There is evidence that the proposals for regional casinos are more likely to be successful than the ones for smaller developments in this: research shows that people are willing to travel to larger, destination or resort casinos. In fact, surveys have shown that around 90% of visitors had travelled more than 50 miles to the largest casinos in the U.S. However, far smaller numbers travelled to smaller ones, and the pattern that has emerged from overseas is of smaller casinos being patronised in greater numbers by locals, with larger ones attracting more from outwith the immediate area. It is the latter that is the most desirable proposition, as large casinos located away from population centres have the greatest potential to deter impulsive playing by locals, and so have the potential to avoid high levels of negative social impacts.
- Whether or to what extent any of these proposals will actually manage to attract large numbers of non-locals is simply not known.

8.52 *Accessibility:*

- It was noted earlier that research shows the location of a casino within 50 miles of an individual's home can double the risk of problem gambling behaviour. To begin with, it should be noted here that all of these proposed casino sites are within around 50 miles of each other (again, with the exception of Dumfries and Galloway), and so the impacts of one could conceivably be felt in surrounding regions, regardless of where any single one was actually built.
- Issues of accessibility also combine with questions of how attractive casinos might be to those who are most at risk. From what we know about casino participation already, we can see that casinos are not particularly popular among those on low incomes, the unemployed and those with low levels of education. For deprived groups living in the Central Belt of Scotland, casinos may not present a sufficiently attractive proposition to merit the time and effort required to actually visit one, especially if this involved a journey of up to 50 miles.
- However, for any to whom a casino *is* easily accessible (for example, the city centre proposals in Glasgow at Ibrox, Partick and the SECC), the situation might be quite different. The location of casinos in these could potentially encourage impulsive playing. Then again, it should be noted that Glasgow already has five casinos which are located in the heart of the city centre, and so are already more accessible than the regional development would be.
- An additional factor whose impact is difficult to assess concerns the recent smoking ban in public places. Problem gamblers, as well as individuals from deprived social groups, have higher levels of smoking than the general population, and evidence from Australia showed a dramatic decrease in gambling among these groups when smoking was banned from gaming venues. Although a smoking ban may not prevent regulars from visiting casinos in Scotland, it is possible that it might deter new visitors.
- Overall, it is simply not possible to predict what the uptake of casino gambling will be among these groups of individuals. However, existing knowledge of current patterns of gambling participation suggests it might be small.

8.53 *Problem gambling prevention strategies:*

- As we saw in Chapters Five and Six, the provision of specialist prevention and treatment strategies can counter the negative effects of increased availability of gambling on the local population. Some international studies found no increase in problem gambling among local residents after the introduction of casinos in Washington State and Oregon in the U.S.; Windsor in Canada; and in cities in Australia and New Zealand. These patterns were largely attributed to the development of comprehensive

prevention strategies and specialist service provision to prevent and treat problem gambling.

- In conclusion, the strategies that regional bodies might adopt to combat the development of gambling problems could have a crucial impact on the overall social impact of a casino.

Proposals for Large Casinos

8.54 Table 8.7 presents some of characteristics known to be associated with problem gambling for the regional authorities that have applied for large casino licenses.

Table 8.7 Characteristics of regions applying for large casinos

Indicator	Falkirk	Dumfries and Galloway	Renfrewshire	Scotland
% LA population in worst 15% DZs	7.1	4.7	19.2	-
Unemployment (%)	3.3	2.7	3.1	3.3
Long term unemployed (%)	13.4	14.4	10.9	13.4
% change in last year	+ 6	+ 9	- 28	- 3
Economically active (%)	80	82	78	79
Weekly median earnings (£)	395	380	435	411
Median earnings (% compared with population)	- 4	- 8	+ 6	-
Chinese residents (% LA population)	0.2	0.3	0.3	0.3

8.55 While regional casinos have the potential to attract large numbers of visitors, from whom it is expected they will draw the majority of their revenue, smaller ones tend not to. Evidence has shown that people are less likely to travel longer distances to visit a smaller casino. In this sense, it can be expected that the casinos proposed for Renfrewshire, Falkirk and Dumfries and Galloway would draw the majority of their customer base from their local populations. Given that it has the highest score of social deprivation of the proposed sites, it can be suggested that Renfrewshire

would experience the greatest negative social impact relative to economic benefit here, and Dumfries and Galloway the least negative. Again, this also implies that Renfrewshire could have the most to gain from the potential economic benefits of a casino development

8.56 However, accessibility is also an issue here and of the three sites, Dumfries and Galloway is probably the least accessible to non-locals. This could mean that even higher proportions of casino visitors were recruited from the surrounding community. On the other hand, it can be noted that these large casinos would house fewer EGMs than regional ones (150 compared with 1250), with smaller jackpots. As larger jackpots are associated with greater potential to encourage problematic play, the type of risk posed by these machines could be considered to be less than that posed by the high jackpots machines in a regional casino.

8.57 The numbers of Chinese people living in all three regions is relatively small, although far larger numbers are within the fifty mile radius. Both the Renfrewshire and Falkirk casinos would be within reach of the populations of Glasgow and Edinburgh which have larger Chinese populations. However, whether or not they would actually travel to the casino is uncertain. Given the fact that casinos already exist in both cities, it is likely they would not.

Conclusions

8.58 It should be stressed that this ‘mapping exercise’ is an instance of applying a blunt tool to some very complex issues. Although they may create employment opportunities in deprived areas, the potential economic benefits of a casino development is difficult to quantify, since the extent to which new jobs would be filled by those who need them most is not known.

8.59 In terms of social impact, the real question is the extent to which any of these casinos would draw on their local populations. The attractiveness of a casino to the local population and the numbers of individuals from vulnerable groups who might actually visit it are all unknowns. In addition, the steps taken by public authorities to prevent the development of gambling problems could have a significant impact on the eventual social impact of a casino.

8.60 In a very broad sense, it can be stated that in Scotland, small casinos and those located in urban or suburban areas would have the greatest potential for negative social impacts, particularly if those areas are already characterised by high levels of social deprivation. However, such impacts can be ameliorated by the provision of specialist prevention services. Given this, it is important that public authorities adopt a proactive approach to ensure that the appropriate resources to prevent and treat problem gambling are specifically targeted within the areas that might host or be proximate to casinos.

CHAPTER NINE FUTURE DIRECTIONS

9.1 This chapter briefly reviews the state of current and planned research on gambling and problem gambling in Britain.

9.2 At present, one major programme is underway, jointly funded by the Economic and Social Research Council (ESRC) and the Responsibility in Gambling Trust (RIGT). Six projects have been funded under the programme, of which the report's authors are involved in one. This study will conduct a sociological analysis of routes in and out of problem gambling behaviour in the Glasgow region. It will utilise qualitative, longitudinal methods to follow a cohort of gamblers, from various demographic backgrounds, over three years and assess the impact of a range of factors on their gambling behaviour. It is currently the only study on gambling and/or problem gambling being conducted in Scotland.

9.3 The other studies in the ESRC-RIGT programme are:

- An anthropological study of bookmakers and Chinese betting based in London
- A Cambridge-based study of the neurobiology of gambling
- A multi-disciplinary study of youth, deviance and gambling based in Wales
- An Oxford-based study of Internet gambling
- A Leeds-based study of families and Internet gambling.

9.4 In addition, RIGT have commissioned a further two relatively small-scale studies. These include:

- A review of international gambling advertising codes
- A review of the effectiveness of gambling industry employee training schemes

9.5 Finally, the Gambling Commission has commissioned a prevalence study of gambling behaviour in Great Britain. This will be carried out this year by the National Centre for Social Research (NatCen), who conducted the previous survey in 1999. Like its predecessor, this survey will have only a relatively small sample in Scotland (circa 1,000). While large enough to highlight major differences at an aggregate level between Scotland and other parts of Britain, it will not allow detailed analysis of sub-groups *within* Scotland or for any sub-national geographic breakdown.

CONCLUSIONS

General Overview

10.1 Understanding of the social impacts of gambling is limited by a shortage of high quality research. The field is complex, and findings are sometimes contradictory. However, some broad conclusions are beginning to emerge.

10.2 Availability of gambling and type of game are features that are strongly associated with problem playing. These features come together in non-casino electronic machines which are associated with the highest rates of problem gambling worldwide.

10.3 Casinos are also associated with high rates of problem gambling, and increasing availability increases levels of problematic behaviour in the local population. However, longitudinal research is beginning to suggest that this may level out or decline over time as communities adapt to the presence of gambling around them. In addition, public health policies that focus on the provision of treatment and information about problem gambling can also militate against such increases.

Research Limitations

10.4 Understanding of the social impacts of gambling is limited by a serious lack of high quality research. Although some economic effects are calculable, social impacts are less easy to quantify, and, to date many studies have produced inconclusive or contradictory results. This can exacerbate the controversy that surrounds gambling, with an evidence base that is often not able to resolve the most contentious issues.

10.5 As a result, both the negative as well as the positive effects of gambling, particularly casino gambling, tend to be overstated. Claims that casinos create significant wealth, new jobs and regenerate local economies; or that they create massive social problems through increases in problem gambling and crime tend to be exaggerated. The evidence base shows that casinos are neither as beneficial as supporters claim, nor as damaging as opponents fear. This situation was summed up by a large-scale review of the effects of casinos in the U.S.:

“For over a decade, advocates and opponents of casinos have argued about whether legalized gambling would produce prosperity or ruin. Our analysis — which compares the experience of counties in the United States that house casinos with those that do not — suggests that both sides are wrong. Instead, the introduction of a casino does appear to produce a few modestly positive effects, a few modestly negative impacts, and, in several areas, no statistically significant effects at all” (Baxandall and Sacerdote 2005: 1).

Problem Gambling and Disadvantaged Groups

10.6 Problem gambling is defined as behaviour that is out of control and that disrupts personal, family, financial and employment relations. It is linked to financial problems, debt and bankruptcy, divorce, lost productivity at work, crime (such as theft and fraud), depression and suicide. It is estimated that between 0.6%-0.8% of the population in Britain are problem gamblers (between 275,000 and 370,000 people). The percentages of the population are similar for Scotland.

10.7 Disadvantaged social groups who experience poverty, unemployment, dependence on welfare, and low levels of education and household income are most likely to suffer the adverse consequences of increased gambling. Within these groups, those who are male, single and under thirty five years of age are also more likely to be at risk from developing problems with their gambling. In addition, problem gamblers are more likely than non-problem players to have heavy and/or problematic levels of consumption of drugs, alcohol and cigarettes.

10.8 Although individuals from these groups may not spend more on gambling in absolute terms, they do spend a higher proportion of their incomes than wealthier players.

Availability and Electronic Gambling Machines (EGMs)

10.9 Availability and convenience are strongly associated with problem gambling. EGMs that are located outside casinos and are widely dispersed throughout the community in bars, hotels and clubs can encourage impulsive gambling and are associated with the highest rates of problem gambling worldwide. In addition, EGMs are the fastest growing sector of gambling markets, often displacing other forms as they spread to new venues. Their popularity among women has led to a trend that has been described as a 'feminisation' of problem gambling. In Britain a new type of electronic machine located in casinos and betting shops – Fixed Odds Betting Terminals (FOBTs) – have become associated with increasing reports of problem gambling.

10.10 At the other end of the scale, casinos tend to require deliberate effort, in terms of planning and travelling to a venue, which discourages impulsive play. Convenience is therefore a crucial regulatory issue (particularly when combined with the absence of public awareness activities), which has implications for the location of casinos. However, casinos themselves are associated with high rates of problematic behaviour, although the picture becomes more complex here with a range of other factors, including the size and location of the casino, coming into play.

Casino Gambling

10.11 Currently, around 3% of the adult population gamble in casinos, although this is likely to increase as the effects of the new legislation come into force. Of these, between 5-8% are considered problem gamblers (i.e. less than one quarter of one per cent of the population).

10.12 Casino patrons have higher levels of income and education than other gamblers, and while casinos are the most popular form of gambling for individuals from the highest social class, they are the least popular form for those from the lowest social class. Individuals on lower incomes and with lower levels of education are less likely to visit casinos than the general population, although when they do, they tend to experience more problems with their playing.

10.13 In Britain, there are two distinct groups who experience problems with casino gambling: single, retired males aged over forty, especially those who are of Chinese ethnicity, and single unemployed males under thirty. These individuals also have higher levels of tobacco and alcohol consumption than other players.

Types of Casinos

10.14 Casinos are distinguished by a range of factors, including size and geographical location, which can result in very different impacts.

10.15 Large ‘resort’ casinos are often located away from major population centres and incorporate a range of leisure facilities which makes them attractive to tourists. In contrast, smaller casinos are often located in more urban or suburban environments and offer fewer facilities, with less potential for attracting tourists.

10.16 The social costs of casinos tend to be exported to the areas where the gamblers who play them live. This means that ‘resort’ and rural casinos tend to be associated with the lowest social costs relative to economic benefits, since the majority of their customers come from outwith the immediate area. However, urban or suburban casinos tend to draw large numbers of local residents to them, meaning that social costs remain within the community.

10.17 Unfortunately, few studies distinguish between the impacts of different types of casinos, with the result that simply not enough is known about these complex variables, and the way they interact to influence problem behaviour.

Casino Impacts

10.18 Research has found that proximity to casinos increases rates of problem gambling in the local population. Some studies have found that the location of a casino within 50 miles of an individual’s home can double the prevalence of problem gambling, although other work also suggests that the provision of specialist problem gambling services and public health initiatives can militate against such increases.

10.19 Casinos do not appear to increase *per capita* crime, although *total* crime in a neighbourhood may increase. This seems to be an effect of population growth: casinos tend to attract large numbers of visitors to an area, and casino-jurisdictions can also experience population growth, increasing the overall population who can commit or fall victim to crime.

10.20 This effect appears to be concentrated on specific types of crime, such as burglary, and does not seem to affect violent crime and most street crimes. Fear of crime does not appear to increase in communities that introduce casinos, and may actually decrease due to the presence of casinos' own security measures and the development of run-down areas.

Long Term Impacts

10.21 Longitudinal studies from Australia, New Zealand and the U.S. have found that the prevalence of problem gambling has remained stable or even declined over time despite the introduction of casinos and other forms of gambling.

10.22 These patterns have been largely attributed to the existence of effective public health initiatives, such as the provision of information to educate local communities about the risks of problem gambling, as well as the provision of a range of treatment services to help those who develop problems with their behaviour. It has also been proposed that rates of problem gambling decline over time as communities adapt to the presence of gambling around them, and develop informal systems to protect against excessive behaviour.

Prevention and Treatment

10.23 Public health strategies can counter possible increases in problem gambling, particularly when targeted towards 'at risk' groups, even when casinos are introduced into a community. In addition, approaches that focus on the prevention of problem behaviour in the general population can save costs in the long term, since, across a range of behavioural disorders, severe problem gambling is one of the most difficult and expensive to treat. Effective interventions at an early stage can help to reduce possible increases in problem gambling throughout the population, even when new forms of gambling are introduced.

10.24 Raising awareness is particularly important in Scotland. As the pre-2005 legislation has restricted gambling in this country for so long, many individuals are simply not aware of the risks gambling can pose, nor are they aware of the availability of services to treat it. For example, less than half of the population have ever heard of Gamblers Anonymous, and only one in five problem gamblers has ever sought help for their difficulties.

Casinos in Scotland

10.25 In Scotland, regional authorities in Glasgow, West Dunbartonshire and Midlothian have bid for regional casino licenses, while Renfrewshire, Falkirk and Dumfries and Galloway have bid for one of the eight large casino licenses that will be awarded.

10.26 In general, small casinos and those located in urban or suburban areas have the greatest potential for negative social impacts in Scotland, particularly if those areas are already characterised by high levels of social deprivation. Large resort casinos have greater potential to attract tourists, resulting in lower social costs relative to economic benefits.

10.27 All but one of these proposals could be considered an urban or suburban location, and in addition, all but one are within fifty miles of each other, and within easy reach of areas of considerable deprivation. As such, it is conceivable that the impacts of one would be felt in surrounding regions, regardless of where any single one was actually built.

10.28 However, the real question is the extent to which these casinos actually attract local residents who are at risk from developing gambling problems. From what we know about casino participation already, we can see that casinos are not particularly popular among those on low incomes, the unemployed and those with low levels of education. However, at present it is not possible to predict what the uptake of casino gambling will be among these groups of individuals.

10.29 Overall, it can be seen that there are negative social impacts associated with increased gambling, and it is likely that the introduction of casinos in Scotland will see numbers of problem gamblers rise to some extent. However, as has been made clear throughout this report, various strategies exist that can be used to address these impacts, and these can reduce potential increases in problem gambling. Research has suggested that in many jurisdictions where specialist problem gambling services were provided, problem gambling did not increase or was kept to a minimum when new forms of gambling, including casinos, were introduced. In areas where there was no such provision, increases were reported.

10.30 In the event of increased gambling in Scotland, it is therefore crucial that public authorities adopt a pro-active approach to problem prevention, by ensuring that the public are informed about the potential risks of gambling and by targeting the appropriate resources to treat individuals who do develop problems with their playing. Ultimately, the steps taken by public authorities could have a significant effect on the eventual social impact of casinos in Scotland.

GLOSSARY

Summary of terms used:

DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition
EGM	Electronic Gaming Machine
FOBT	Fixed Odds Betting Terminal
NGISC	National Gambling Impact Study Commission
NORC	National Opinion Research Centre
NRC	National Research Centre
PC	Productivity Commission
SOGS	South Oaks Gambling Screen

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