International Management Journals

www.managementjournals.com

International Journal of Applied International Business

Volume 1 Issue 1

Evaluating Gambling Policy : A Case Study in Queensland, Australia

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ISSN 1743-2111

Abstract

Gambling has become a large revenue source for many governments, due to its popularity with large sections of the public, ease of implementation, and the high real tax rate it can bear. It is also becoming an increasingly important international business. In terms of evaluation, however, it is much easier to quantify the benefits of gambling through tax revenues than the overall community harm costs. This imbalance is examined with reference to an evaluation of the evidence regarding gambling in Australia generally, and more specifically Electronic Gaming Machine (EGM) Gambling Policy in Queensland.

Keywords : gambling, policy, effects, evaluation, Queensland, EGMs

Introduction

Gambling is now a large taxation revenue earner for many western governments worldwide (for example UK, USA, Australia) at both federal and state levels, and it has become an increasingly important and international business. It is of particular importance in Australia where, according to some measures, Australians are among the developed world's most committed gamblers with per capita expenditure exceeding that of the United States, Hong Kong and New Zealand. Indeed, the total Australian expenditure on gambling, of $10.8 billion, is greater than that spent in Australia on energy or household appliances and approaching the level set by alcohol. It is also well recognised that Australian governments have played a major role in this phenomenal growth with first, enabling the legalisation, design and provision of gambling activities, and second, establishing the differing revenue extraction devices.

The introduction of such legalised gambling activities is often accompanied by spending on "good causes", funded by some of the revenue generated from the gambling activity. These "good causes" funds are effectively, therefore, generated from hypothecated taxes on gambling, a feature actively promoted in the marketing of these activities, and perhaps an implicit acknowledgement of the need to mitigate some of the adverse socio-economic impacts of gambling.

Methodologically, however, it is likely to be much easier to quantify the benefits of gambling through tax revenues (and spending on good causes) than the community harm costs (both social and economic). This is because the benefits are more direct (e.g. revenue) and many of the costs indirect, producing a quantitative / qualitative split. In addition, factors that can reduce the benefits, such as displacement, etc. are also difficult to measure, and are often prone to data-unavailability related problems. This is likely to have important implications for policymakers, required to make decisions about the restriction (or lack of it) on the spread of this industry. This paper examines

the evaluation issues in relation to Electronic Gaming Machine (EGM) gambling in Queensland.

The interest in EGMs from Government sectors has escalated since the Commonwealth Productivity Commission Inquiry (1999b) which highlighted the fact that Australia had at that time nearly 180,000 gaming machines, thus accounting for 21% of all the gambling machines in the world. This situation provided an early indicator of community and government concern about the social impact of gaming machines. With $871.3 million gross revenue generated from gaming machines alone in Queensland, the State Government's interest is not unfounded (QOGR Annual Report 1999/2000). According to the Queensland Gaming Commission's Annual Report (1999-2000) the Queensland Government is 'Committed to developing a Gambling Strategy focussing on prevention, protection and rehabilitation to ensure the social costs of gambling are minimised, whilst maximising the benefits to the community' (p.8). With this commitment and interest established, it is paramount that both the social costs of community harm and the potential benefits are understood in order to provide a mechanism for measuring and thus meeting the State Government's goals and improving policy implementation.

The next section briefly examines the available literature concerning the effects of gambling. The history of EGMs and gambling policy in Queensland specifically are then discussed. Methodological issues and outcomes are then outlined, followed by a summary of the results obtained. Finally, conclusions are drawn as to the limitations of the research, an evaluative framework is developed and future research required to operationalise this is outlined.

The Literature : Measuring What can be Measured

Policymakers have consistently extolled the virtues to be generated from gambling and downplayed the costs. There is, nevertheless, evidence that such costs do exist, both directly and indirectly. Upon implementation, virtually all taxes have effects on the rest of the tax structure, and gambling taxes are no exception, since money spent on gambling cannot then be spent on alternative goods, paid in taxes or saved. Borg and Mason (1993), for example, found lotteries to signify a fundamental revenue source in 33 states in the USA. They also found that states without a state income tax but with high sales and excise taxes lost considerably more non-lottery revenue as a result of instituting the lottery, in some states as high as 23% of the government's lottery proceeds. They also speculated, however, that the long term effect could be more marked, given that the reduced spending on private sector goods as a result of the lottery could mean reduced investment, further reducing future tax revenue. Borg and Mason (1993) concluded that lotteries were neither an efficient or equitable substitute for more traditional tax sources.

Many studies also show the regressive nature of gambling spending generally and hence that its taxation implications (against income) are also regressive.

In terms of EGMs, Layton and Worthington (1999) cite previous work (Madhusudhan, 1996; Rivenbark and Roonsaville, 1996; Szakmary and Szakamary, 1995) as evidence that 'the pattern of expenditure may work to the relative detriment of low income individuals and deepen the economic problems that must be addressed by other public support programs' (p. 430).

This regressivity, however, is also being seen in the areas where gambling-generated money is spent. Rubenstein and Scafidi (2002) found that the Georgia lottery for education was regressive in terms of its implicit taxation and ethnic minorities spent significantly more on it. However, higher income households received higher levels of benefit from the lottery-funded programmes than lower income households did, caused by the patterns of spending on the lottery products and the higher education nature of the scholarships that it was funding. Clearly, where the benefits of such spending go depends on the designation of eligible programmes and the rules governing application. Borg and Mason (1988) found, in the case of a lottery in Illinois to support education, that it caused the displacement of other funds rather than added to them. They concluded that lotteries designated to support education do not do so, because of displacement, and the tax structure inherent in the lottery itself was inefficient and a regressive way of paying for such education spending. In US education, the lottery funded grants tend to go to higher socio-economic groups, or alternatively expenditure displacement takes place, allowing lower taxes than would otherwise have been the case, disproportionately benefiting higher socio-economic groups.

The gambling industry and the public revenues it produces are also accompanied by some undesirable socio-economic problems. For example, whilst gambling participation is voluntary, the pattern of expenditure may work to the relative detriment of low-income individuals and deepen the economic problems that must be addressed by other public support programs (Szakmary and Szakmary, 1995; Madhusudhan, 1996). For instance, there has been a steady increase in the percentage of household disposable income spent on gambling in Australia from less than one percent in the mid-1970s to currently in excess of three percent. Furthermore, there is evidence that certain forms of gambling have the capacity to create compulsive gambling and major addiction, attract criminal elements and foster corruption (Mikesell and Pirog-Good, 1990).

Public policy in Australia has also now begun to recognise some of these problems, largely in response to a community backlash against the expansion of gambling opportunities. A survey conducted by the Productivity Commission (2001) indicated that 70 percent of respondents believed gambling did more harm than good and 92 percent opposed the introduction of new gambling venues and machines. Currently, at least some proportion of tax levies is spent on harm minimisation, the treatment of problem gambling and research into the costs and benefits of gambling. Similarly, smoking bans, limits on hours and the restriction on access to Automated Teller Machines (ATMs) within gambling premises are also representative of a differing approach to policy in this area (Matterson 2003), as are requirements for the

display of information about the "price" and nature of gambling products, the provision of information about the risks of problem gambling, controls on advertising and pre-commitment options, including self-exclusion arrangements (Productivity Commission 2001).

Nevertheless, there is an ongoing need to address the concerns of equity and efficiency relating to the incidence of gambling-related taxation, and the important question of the socio-economic burden of gambling expenditure itself. Borg and Mason (1988), Borg et al. (1991; 1993), Scott and Garen (1994), Davis et al. (1992), Jackson (1994), Hansen (1995), Cooper and Cohn (1994), Rodgers and Stuart (1995), Scoggins (1995), Szakmary and Szakmary (1995), Madhusudhan (1996), Layton and Worthington (1999) and Worthington (2001) have all examined the efficiency of gambling-related taxation as a means of fiscal extraction with an emphasis on maximising state revenue through the design of suitable tax structures and products. More recently, research has focused on the wider interpretation of demographic and socio-economic incidence as a means of providing policy input into problem gambling and other undesirable consequences of the expansion in the gambling industry. Work in this area includes that done by Garrett and Marsh (2002), Delfabbro and Winefeld (1999a, 199b), Jacques et al. (2000), Grun and McKeigue (2000) and Stanley and French (2003).

The literature suggests that gambling taxes are high and regressive; specific funds for "good causes" funded by gambling-derived revenue tend to disproportionately (certainly compared with need) benefit richer groups because of the regulations determining spending; and spending on existing areas of government is likely to generate substitution rather than additional resources; and gambling creates undesirable social and economic outcomes both for individuals and communities. Simultaneously governments in many countries seem intent on expanding such activities. Clearly there is an issue for evaluation here, which we shall explore in relation to EGMs in Queensland.

EGMs in Queensland

EGMs were introduced into Queensland in 1991 following the passing of the Gaming Machine Act 1991. The object of the act was to ensure that, on balance, the State and the community as a whole benefit from gaming machine gambling. This was to be done through

> "(2)
> (a) Ensuring the integrity and fairness of the games;
> (b) Ensuring the probity of those involved in the conduct of gaming machine gambling
> (c) Minimising the potential for harm from gaming machine gambling."
>
> (Gaming Machine Act 1991)

At the core of the reasons for introduction were economic imperatives. Put simply, the Queensland government was looking for new ways in which to raise revenue and there was an unwillingness to raise taxes. There had also been a long period of lobbying by non-profit organisations who believed their facilities were inferior to those in NSW which were funded by poker machines. Inadequate facilities were most evident in low socio-economic areas which had a young population and high unemployment levels. There was a need to provide for such areas and most were in Labor (ruling party) electorates. The Australian Labour Party (ALP) had promised legalisation of the machines in the election campaign of 1989 and this was seen as a policy to meet the needs of their own constituency. Indeed this was later to be translated by Premier Goss as “a taj mahal in every suburb”.

There had also been pressure from tourist operators on the Gold Coast who believed the development of the industry was suffering without poker machines. They advanced the arguments for more jobs and better facilities to stop the drain of people and money into northern NSW (just minutes travelling time down the coast).

However, there were public concerns about the effects of the gaming industry itself, and the newly elected Goss government set up an Inquiry which led to the establishment of the Machine Gaming Commission. This gave clear principles to the industry in relation to the machines and venues as outlined in the act in 2 (a),(b). In relation to 2 (c) there was no such precise action. A Community Benefit Fund was set up through which grants were made on a submission basis for local facilities. A number of “Breakeven” centres were also established to deal with individual problem gamblers. However, the issue of overall community harm was seen as the sum of the parts of individual programmes rather than the issue being addressed through a range of policy instruments. While there were some changes to the Act in 1996, these were much more about shifting the regulatory regime from the government to the private sector. The Problem Gambling Advisory Committee, set up in 1998, has continued to recommend practices which are individual in nature, such as counselling or banning from venues.

The policy thus makes two key assumptions about the relationship between the pursuit of community benefit and its correlation to the minimisation of Community Harm. While Community Benefit is seen in community terms (most obviously via the benefits of tax revenue and the community benefit fund) the minimisation of Community Harm is seen in individual terms (problem gambling). The reality is that harm also exists at a community-wide level, as shall be seen later.

Additionally, while the regulatory regime may ensure that venues, licences and payouts are processed properly, there is no policy to ensure the maintenance of what should be one of the major Community Benefits – community facilities. While community facilities have been built for the use of local citizens, much of the community ownership has been passed into the hands of entrepreneurs or large Australian Sporting Organisations with no former links to Queensland. The policy was not able to ensure the community

as a whole benefited from these facilities, and profits now often go to business people rather than the original community organisations for expansion of sporting and cultural local activities. Indeed, the ultimate irony is that the core business organisation of some of these clubs now meet in someone's local garage, while the edifice it developed from gambling has been passed on to another, often external, group with little of the early focus maintained. While the policy objective may focus on Community Benefit, this is not detailed, nor are there measures in place to ensure such objectives are met in this context. Thus, the degree of community benefit may be over-estimated, but the extent of such over-estimation is unclear, due to the difficulty in quantifying the effect of such changes of ownership on the community.

Another Community Benefit identified by the government itself and interviewees was the growth of the gambling industry and the impact on employment growth. Gambling employment has risen from 1.5% in 1991 to 2.1% of total employment in 1996. It is now 12% of the cultural and recreational sector.(ABS Census of Population and Housing 1966-1996) However, this needs to be measured against general job growth in the area and whether these jobs are a net growth due to the establishment of gambling facilities in the area or whether they are jobs simply moving from other places and venues which closed because they did not have EGMs. Such displacement effects are also very difficult to measure, because of the problem of the counterfactual.

Gambling as an entertainment has been identified as a Community Benefit as Queenslanders spend an average of $1,000 per head, which is up by $63 since the introduction of EGMs. However, there are other concerns about such a benefit – being in a smoke filled area, passive smoking, lack of exposure to the air, solitary and sedentary activity. The government should measure this against overall objectives, given that such patterns of behaviour clearly do not enhance the community's health. Again, there is a problem evaluating this.

Methodology

In determining an effective methodology, it is enlightening to examine first what the Queensland Government itself does in relation to evaluation. The Gambling Legislation Amendment Act 2000 (s.21.1A.(1)) seeks to ensure that 'on balance, the State and the community as a whole benefit from gaming machine gambling'. The concepts of **'**Community Harm' and 'Community Benefit' are used as criteria by the Queensland Gaming Commission to assess whether there is justification for the granting of further Electronic Gaming Machine (EGM) licenses. However, the social and economic implications in each case relate to a particular venue rather than considering the broader issues of the interrelationships between the gaming establishment, commercial operations, community welfare and community organizations. Further, the Responsible Gambling Strategy of the Queensland government targets individual gamblers with a gambling pathology by citing that the strategy is concerned with recreational gamblers, people with problem

gambling, those at risk of developing problems and those affected by other's gambling. In order to be successful, the gaming applicant needs to show that community "harm" is minimized and there is indeed "benefit" to the community. However, the concepts of community harm and benefit are not well understood in terms of aggregate community level impacts.

The aim of the evaluation was therefore to develop an empirical model of the social and economic impacts of EGMs (proliferation, revenue generation and spending) within a low socio-economic area that also has a high-density of gaming machines. This research builds on prior work done by Layton and Worthington (1999) and addresses the need for quality research established by the Queensland Gaming Commission (Queensland Gaming Commission 1999, p. 24) and adopted in the *Policy Direction for Gambling in Queensland* (Queensland Department of Treasury, 2000). Layton and Worthington's (1999) research covers the factors *leading up to* the decision to gamble; what is missing is what happens *after* the decision to gamble is made, as well as an updated analysis. It is thus the whole range of social and economic impacts of gambling, specifically gaming, which needs to be examined.

Much of the previous research conducted on gambling in Australia has concentrated on the psychological and behavioural factors leading to problem gambling (Crisp et al, 2000; Delfabbro and Winefield, 1999a; Dickerson and Hinchy, 1992; Dickerson and Baron, 2000; Kyngdon and Dickerson, 1999). This study provides an opportunity to begin to address the gap in the research evaluation literature, by providing an economic-based evaluation. This research also deliberately avoids using the term "problem gambling", as it diverts attention from a whole-of-community perspective. To focus only on problem gamblers suggests that the rest of the community is immune from "community harm".

Recent studies of gaming in Victorian local government areas have repeatedly demonstrated that low socio-economic areas have a higher density of gaming machines (Doughney et al, 2001; Svensen & Doughney, 2001). The reality of this situation means that areas that can least afford gaming machines have ready access to an abundance of EGM's. These researchers argue that the majority of economic impact research work on gaming is flawed and presents an over-optimistic view, because it is based on Australian Bureau of Statistics survey data – which finds that self- reporting of gaming loss is massively underreported (only 10% of total losses were admitted by respondents). Using real data and modeling, their work supports the arguments that the lowest income and most disadvantaged areas are suffering the most gaming losses. As a result of this series of research, Doughney et al (2001) advocate that researchers engaged in work on gaming impacts need to avoid survey methods, as there are too many problems in dealing with underreporting.

This research therefore focuses on addressing the social and economic impacts of gaming, in order to provide a perspective on gambling in Australia which to date has been dominated by research on the psychological and behavioural factors related to problem gambling. Furthermore, the research addresses a deficit noted by the Queensland Office of Gaming Regulation and

community stakeholders in order to provide data that is essential in establishing future policy parameters. The literature (both global and Australia-specific) highlights the requirement to examine the entire process of gaming, from the factors contributing to the act of gaming (relative to other forms of gambling), policy outcomes in terms of the siting and concentration of EGMs, the socio-economic distribution of the generation of EGM revenue generation and benefit fund distribution, to the wider social effects of gambling. As it transpires, however, this approach, whilst appropriate, makes it impossible to determine the scale of cost and benefit, to compare with the direct and unadjusted benefits of revenue highlighted by governments, thus impacting upon the policy outcomes for governments.

One clear problem that the approach needs to deal with is the lack of clear definition of community benefit and harm. This project is thus concerned with first, establishing a deeper understanding of what community benefit and community harm means and second, utilising notions of community harm and benefit in order to generate a framework to be tested. There are a number of research techniques that are appropriate to achieving this objective. These techniques include semi-structured interviews, focus groups and a survey and analysis of Queensland Treasury and Australian Bureau of Statistics (ABS) data. This multiple method approach enables triangulation or converging lines of inquiry which in turn improves validity (Yin, 1993, Marshall and Rossman, 1995). This project entailed gathering both quantitative and qualitative data in order to develop a model that maps community harm and benefit as a consequence of proximity to, concentration of and access to gaming machines.

Qualitative techniques include conducting focus groups and gathering interview data to provide a deeper understanding of community-based definitions of community harm and benefit. Quantitative data techniques included regression analysis of household expenditure on gambling activities against a range of explanatory variables such as income, income sources and socio-economic status, and undertaking a number of correlations and regressions between EGMs revenue generation in LGAs and various measures of EGM density (EGMs per 10,000 population and machines per site). The insights generated from this exploration of gaming in a socio-economically disadvantaged area are used to develop a working framework of community harm and benefit in relation to EGMs.

Semi-structured interviews with the community and government sector stakeholders were conducted to provide information on the perception of how community harm is minimized, what the community benefits are and views on the effectiveness of existing gaming policy and processes. These interviews were also used to inform the questions and approach used for conducting the subsequent two-hour focus groups sessions conducted with community stakeholder groups to provide insights into the extent to which the community has been affected by the introduction of EGMs. Data sets of gambling revenue, EGM concentration, household expenditure and socio-economic characteristics were also obtained in order to develop the direct monetary /

economic effects side of the model. These data sets were obtained from both government and non-government sources.

In terms of numbers, interviews were conducted with twenty of the major stakeholders with an interest related to the gaming industry in the Logan area. The interviews were undertaken in the period May 2003 to August 2003. In order to ascertain a range of views, different sets of stakeholders comprised the broad groupings of interview respondents and included community groups, public policy makers, government officials and club and hotel managers.
Of the total of twenty interviews, eight interviews were conducted with community leaders, five of whom were women, and three of whom were men. Half of the people interviewed from the community sector had been working in the Logan area for more than 20 years, so were able to examine issues from a perspective of the situation both pre- and post-introduction of EGMs.

Six interviews were conducted with club and hotel owner/managers, five of whom were men, with one being a woman. Most of the club managers had only been involved in clubs since the introduction of the EGMs but one of the hotel owners had been in the business for more than 20 years.

Six interviews were conducted with public policy officers in Logan city, of whom three were men and three were women. Of that total, five of the people had been working in the Logan City area for more than 10 years while one had been in the public policy area for five years.

Two questions were asked of the respondents to ascertain the salient issues in relation to community harm and community benefit of EGMs:

- What do you consider to be the Community Benefits of EGMs (poker machines) to the Logan area?
- What do you consider to be the Community Harm brought by the EGMs (poker machines) to the Logan area?

During the period of the research there was an opportunity to capture the views of a wider group on EGMs and community harm and community benefit. An invitation was extended to attend a meeting of the Liquor Industry Action Group on 26 August, 2003 and conduct a group interview about the issues of community harm and community benefit in relation to EGMs. At that meeting, a broad range of community, government and industry representatives participated in the group interview. The same questions outlined above were put to the group.

Of the twenty-seven in attendance:

- Police - 6
- State Members - 2
- Hotels - 3
- Security - 1
- Community - 2

- Logan City Council - 1 Health Official
- Queensland Licensing - 2
- Clubs - 10

The focus groups were designed to elicit community attitudes towards, and understanding of, community harm and community benefit of EGMs in the local area, Logan. It was identified that the personal experiences of focus group participants and their interpretation of these experiences were of significance for this research. Focus groups have several advantages in relation to the type of research required for this research. First, the interactions that occur between participants at the focus group session makes it possible to elaborate on ideas and generate new ideas more readily than is possible in one-on-one interviews. Second, there is provision for quality control on data collection in that participants tend to provide checks and balances on each other in relation to incorrect and/or extreme views. Finally, it is possible to obtain a wider perspective of participants' perceptions of the changes that have occurred than through individual interviews (Morgan & Krueger 1998).

The quantitative study comprised three stages. The first stage involved undertaking regression analysis of household expenditure on gambling activities against a range of explanatory variables such as income, income sources, socio-economic status and suchlike. This analysis determined "decision to gamble" effects at the all-Australian level in order to create the context within which EGM gambling occurs and identified the vulnerability or otherwise of low-socio-economic groups (and others) to gambling generally, and at EGMs in particular. It also allowed a "gambling-policy" context to be examined, given the different emphases on different forms of gambling in different states. The second stage of the research involved capturing Queensland level data on EGM density and revenue. The purpose of this stage was to examine possible policy issues concerning the location and density of EGMs, as well as categorise the low socio-economic area of Logan in terms of EGM revenue generation and spending and EGM density, and to compare these findings with Queensland average results. The final stage entailed utilising specific Logan-level data to further explore issues surrounding allocation of gambling-generated Community Benefit Fund resources.

The analytical technique employed in the first stage of the quantitative study was to specify expenditures on various categories of gambling in overall household expenditure as the dependent variable (y) in a least squares regression with socioeconomic and demographic characteristics as explanatory variables (x). All data is obtained from the Australian Bureau of Statistics' (ABS) 1998/99 Household Expenditure Survey Confidentialised Unit Record File (CURF) and relate to a sample of 6,892 probability-weighted Australian households. The strength of this data is that it is a national survey and it provides expenditure data for different forms of gambling by a range of characteristics. However, it has two weaknesses when used to analyse gambling data (Productivity Commission 2001). First, with the rapid growth in the Australian gambling industry, the data from the Household Expenditure

Surveys in 1993/94 and now 1998/99 pre-date some of the growth of Australian casinos and the expansion of gaming machines in Queensland, South Australia, Victoria and Tasmania. Second, the data is thought to understate the actual level of gambling expenditure in Australia. This is likely to be associated with the selective recall of gambling expenditures over the two-week survey period and the relatively uneven distribution of gambling expenditures throughout the year. Nevertheless, this data is utilised as it is deemed the best available.

The second stage involved undertaking a number of correlations and regressions between EGMs revenue generation in LGAs and various measures of EGM density (EGMs per 10,000 population and machines per site). This endeavour produced data results linking revenue per EGM and EGM revenue per head of population with the abovementioned measures of EGM density. It also examined the average funding quantum for the Logan area compared to the Queensland average for the gambling-revenue derived Community Benefit Fund (CBF) grants.

The third stage of data analysis comprised further evaluation of resource inputs associated with Community Benefit Fund allocations. The within-Logan distribution was calculated for the different social strata of Logan, the proxy for social strata adopted in the research being relative house prices.

Taken together, these quantitative techniques build a picture of the explanatory factors for community gaming behaviour and its uniquely financial outcomes. In short, the research strategy uses a variety of new and existing data sources that capture different aspects of community harm and community benefit resulting from the number, siting and concentration of EGMs and use of the resultant revenues. Data sets from government and non-government bodies were interrogated to provide the base information required. Data requirements from statistical offices, however, mean that these agencies will often not release data at a local level, necessitating the use of national level quantitative research, which can then be built upon by local level qualitative analysis, utilizing a “triangulation methodology”.

However, it is important that the project is confined to a specific local geographical area that allows an investigation focus on geographic areas that are smaller than the current Local Government Area (LGA). The use of LGAs as a geographic containment has provided a promising trajectory in developing indexes of disadvantage.

In choosing a low socio-economic area, the research permits the costs and benefits to the indigenous local community to be captured more fully. This purposeful case choice of a particular LGA in a suburban setting is to avoid the problem of “through traffic” in resort or tourist areas contaminating the results of the study. The reasons for the exploration of socio-economic impacts in a low socio-economic area, such as Logan, are provided by the Queensland Office of Gaming Regulation in their *Review of Gaming in Queensland* (QOGR 1999). It noted an increased public backlash against uncontrolled EGM growth with submissions from community groups such as

Break Even and Local Governments such as Logan City Council. It is important to reduce the contributory factor of tourism from the gaming machines in understanding the social system. As there is no casino nor major tourism attraction there, it is highly likely that the gaming premises in Logan are servicing the local market only. Located in the South East Queensland corridor, Logan City is bounded by five local government boundaries (Brisbane City, Gold Coast City, Beaudesert Shire, Redlands Shire and Ipswich City.) The estimated population of the City is 170,000 (www.logan.qld.gov.au) and is characterised as a urban fringe development . In the sixties and seventies it was developed around large scale public housing development, and subsequently, as a consequence of affordable housing, has attracted a large number of migrants. High levels of unemployment are also experienced in Logan, particularly amongst young people. Generally the City has a young age profile, with around 70,000 persons (44%) aged 24 years or younger in 1996.

Findings and Results

Quantitative Results

The quantitative stage of the study indicated that the overall incidence of gambling-related taxation is only mildly regressive with respect to income and was only a statistically significant relationship with on course betting. Rather than the level of income itself it is its primary source, whether salaries and wages, self-employment, investments and superannuation, or pensions and other government benefits, that was found to be important. For EGM machines, socio-economic status was found to be important in explaining gambling behaviour, with low socio-economic status related to higher expenditure on EGMs. This can be seen as impacting on the socio-economic status of Logan, approximated through income levels.

Regression results also indicated that, at the Local Government Authority area level across Queensland as a whole, with “average EGM metered win per adult” as the dependent variable, as well as “approved EGMs per 10,000 adults” and “average number of EGMs per site” being positive, strong, and statistically significant explanatory variables (at the 5% level), per capita taxable income was also found to be a slightly negative explanatory variable (as would be predicted by the regressive relationship with gambling outlined in the literature) and significant at the 10% level.

Statistics for the last six years (June 1997-May 2003) derived from data provided by QOGR (2003) are pertinent to this situation. For example, in Logan the number of EGM sites has risen by 13.6% compared with 18.3% for Queensland as a whole. In addition, the average numbers of EGMs per site have risen by 24% (to 49) in Logan compared with a 36% rise (to 27) for Queensland as a whole. Given that for Queensland as a whole a 70% positive (and statistically significant) correlation was calculated between the average metered win (revenue) per head of population and the average number of EGMs per site, Logan’s relatively larger venues are likely to be generating

more revenue per person (this relationship is possibly due to the more attractive nature of venues with larger number of machines, such as better quality facilities).

It is true that in Logan the number of operational EGMs has risen by only 18.3% (to 119 per 10,000 adults) compared with 41% for Queensland as a whole (to 152 per 10,000 adults) from the same base of 94 per 10,000 adults in 1997. For Queensland as a whole, a 55% positive correlation was found between the average metered win per head of population and the average number of EGMs per 10,000 adults. However this seems to have been more than compensated for by the average size of establishment, and the fact that since 1997 the metered win (and tax revenue) has risen by 134% in Logan, compared with 111% for Queensland as a whole. Indeed, a "scale" effect can be discerned here, possibly related to the larger venues and smaller number of machines within the population, with the average payout per EGM (and hence tax revenue given the fixed percentage of winnings per $ spent) in Logan having risen by 66%, compared with 31% for Queensland as a whole.

Table 1. Logan and Queensland

	Logan as Percentage of Queensland Total	**Logan as Index of Queensland (where Queensland = 1)**
Mean Taxable Income (1)	93.6528	0.936528
Population (1)	4.6	
Gambling Revenue (2)	5.4	1.15
Community Benefit Fund Proceeds (2)	3.5	0.74

Note : (1) Office of Economic and Social Research (2003)
(2) Queensland Office of Gaming Regulation (2003)

Table 1 shows that Logan is generating 15% more of the gambling revenues to government than would be justified by its population alone, and that the area does not receive the benefits from the CBF that would be justified by its population, let alone its contribution to the gambling revenues that produced the gambling fund in the first place. This situation is worsened still further when one sees that its mean taxable income is lower than the Queensland average. Factoring this in, Logan is paying 23% more than its "fair" share (relative to income and population size) in gambling revenues to the government.

Whilst Logan can therefore be seen as fitting in with the general trend in the literature, data from Logan does provide some additional evidence from the grant-giving process. Examination of the Gambling Community Benefit Fund website (http://www.gcbf.gld.gov.au/html/about.html) revealed that the fund operates via allocation of one-off applied-for grants (of up to $30,000) to approved non-profit organisations, for activities or services that can demonstrably benefit the Community and Queensland. There are four funding rounds per year, via completion of a funding application package, and

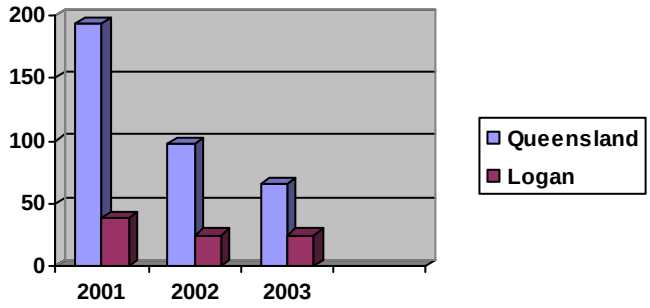
approval from an “independent” community-based committee appointed on a 3 year basis.

Logan was found to be relatively poor in terms of making successful applications. This may be at least partly due to the nature of the applications process relative to the capacity of those making them, a problem Bailey (1995) pointed out for the UK lottery, (though successful grant applications were for relatively large amounts). Some statistical examination of the 12 postal coded areas in Logan obtaining CBF money was possible. This data indicated a strong negative correlation between the wealth of the postcode (as indicated by average house prices) and the CBF money per head it was generating (of -0.49, significant at the 5% 1-tailed level). Whilst this showed that poorer areas were benefiting relative to richer ones, the relationship became much weaker (-0.146 and insignificant, when the central administrative area of Logan was excluded). This central area, more able to draw in outside administrative expertise, was the poorest in terms of house prices but the strongest in terms of obtaining CBF money. A much stronger positive correlation existed between total grants awarded and pure size of population in the area (0.87, significant at 1% level). Visual analysis of the types of groups obtaining grants also suggested that “professional” community organisations dominated the successful bids to obtain funding, suggesting that the way the CBF is administered is detrimental to groupings without the expertise necessary to fill in the forms or manage the application process.

The collection of secondary data was hampered by the lack of information that may be directly linked or attributed to gambling or particularly electronic gaming machine expenditure. This lack of data severely limits comprehensive understanding of gambling and social harm effects. A major concern exists with capturing gambling related crime data. Crime and criminal activity is a difficult area to attribute causality to gambling as the current crime records do not log whether gambling problems are a cause of the crime. Secondly, the samples surveyed in previous research are more likely to under-report their crime. Thirdly, as much of the crime is committed against family, there is less inclination to report it to police and it goes undetected. Regardless, research undertaken in 1999 conducted with Break Even clientele suggested that one in three persons report committing illegal acts to finance gambling. However, it was not possible to relate available crime statistics in Logan directly to gambling.

The limited number of years over which the crime data is available and the lack of other relevant data sets for variables which (theory suggests) could also help explain changes in the crime rates in Queensland as a whole and in Logan make it impossible to carry out a valid statistical (multiple regression) analysis of the relationship between crime and the number and concentration of EGMs. The very limited number of years over which the housing rent arrears data is available (allied to changes in its coverage) also makes it impossible to carry out a valid statistical analysis of the relationship (or lack of one) between such rent arrears and the number and concentration of EGMs.

Graph 1: Public Housing Evictions 2001-2003 Logan Area Office, Department of Housing compared to Queensland



However, the high proportion of total Queensland housing rent arrears and evictions that are accounted for by Logan lead to the conclusion that there are a number of contributory factors affecting Logan in ways different to Queensland as a whole. Logan has a very high proportion of the Queensland total of evictions given that it has only five percent of Queensland's population. EGM location and concentration may be one of the factors leading to this.

Qualitative Results

The qualitative data provides a picture of the range of stakeholders' perceptions, experience and insights into what constitutes community harm and community benefit in relation to the introduction of electronic gaming machines. The most significant issues raised in all of the focus groups relate to the problem that while gambling is constructed as a private, individual choice of people within a community, the community as a whole bears the cumulative consequences of an individual's problems with gambling. Welfare organizations have to support families and individuals, and family members suffer loss of shelter, debts and the fracturing of family life as a consequence of an individual's problem gambling. In addition, the community harm and community benefit attributable to the location of gaming establishments and the presence of EGMs, together with other commercial enterprises, create a nexus of harm that moves gaming significantly into the area of community concern and interest.

With two exceptions, all participants in the three focus groups belonged to the local 'Digger's Club' and many also belonged to, or attended, Greenbank RSL or a Bowls or Sports Club in the area. Some also cited attending Southport RSL and Twin Towns clubs.

The Benefits of Membership were identified as:

- Cheap joining fee ($5).
- Discounted food and drink.
- Having a place to meet friends or take family.

- Providing entertainment in the form of musical bands and the poker machines.
- The free bus service. This was seen as combating drink/driving problems and enabling access for older patrons who no longer drove. It was also seen as offering safety for older patrons.

The majority of participants used the EGM's, spending between $1 and $20 each time they visited gaming establishments. "Playing the pokies" was regarded as a form of entertainment with winning as a bonus. Participants attended gaming establishments on average once a fortnight, with some attending weekly, others monthly. The standard of the facilities of the larger clubs was considered an asset to the community. These larger clubs were perceived as being well-managed, providing a safe and secure place to meet and socialize. A major benefit was considered to be that the gaming establishment provided a free venue for community organizations to meet.

The benefits to the community of the clubs were identified as the generation of employment and raising revenue for the community. The harm identified was in the effects of uncontrolled gambling that the majority of participants could relate from personal experience. These included loss of large sums of savings, and amounts of $9 000 and $10 000 were cited in different groups.

Incidences of loss of job, house and car and marriage break-up were all cited as examples of the gaming losses incurred by family or friends. In the three focus groups, there was agreement that the poker machines were detrimental within the community. It was acknowledged that individuals needed to exercise control over their use of machines, however a number of factors combined to encourage the use of machines.

These included:

- Provision of ATM's close to poker machines.
- Provision of childcare to encourage mothers to attend the club and play EGMs.
- Food and drink brought to players at machines, sometimes free.
- Incentive/reward schemes that provided most points for use of EGMs.
- Free bus.
- Speed with which the game ended when multiple rows/games were played. A dollar coin had to be inserted to play even though it was a 2c machine.

In the three groups there was a strong perception that the club's primary focus was on profit at the expense of a social and moral obligation to the community that supported it.

- Jobs created were only casual or part time and limited in tenure, thus a long term benefit was not achieved in the community.
- The machines were programmed to win.

- There was not an equitable return on revenue raised, to benefit the community.
- The introduction of EGMs had reduced the social interaction in the clubs as players concentrated on the machine and game.

Issues in relation to community harm were considered to be exacerbated when factors such as proximity of gaming establishments to local housing and sources of funds/resources (such as pawn shops, ATMs, welfare organisations and credit lines) came into play.

In all focus groups, participants raised the issue that job creation promised as part of the economic infrastructure in an area in response to gaming was not delivering quality or permanent employment. Indeed, the majority argued that the jobs in clubs were merely replacements for ones that were displaced in the local hospitality industry as a result of the development of the club.

Ideas presented in these focus groups to limit harmful effects of EGMs included :-

- Limiting the hours that machines could be used.
- Limiting the number of venues with machines so there was a choice for patrons.
- Using a card to purchase games that was limited to a safe amount over a pay period.
- Educating school children and adults about the possible effects of gambling.

All but two of the interviewees (both from the community sector) believed the EGMs had brought high quality facilities to the area. These facilities were widely used by all groups in the area and were offered free, unlike the limited facilities provided by the Logan City Council, who charged for their use. These facilities were seen as a safe and secure environment for women alone, families and others to go to, to enjoy free or very cheap entertainment, wholesome food and relaxation aside from the use of the poker machines.

While all recognized the contribution of the Clubs to the local sporting groups and to schools through donations and sponsorships, there was some concern expressed at the ability of clubs to maintain their core business. Indeed, one large club no longer has the original club on the premises. This raises the issue of EGMs providing funding for the development and expansion of the core activities of the clubs.

The issue of job creation by gaming venues was keenly asserted by the industry spokespeople but the community sector had some reservations about such growth. They held a view that while there was a growth in jobs in the clubs and hotels, many of these jobs had merely come from other establishments in Logan City such as coffee shops and food outlets which closed down when the gaming establishments were opened.

However, there was agreement that the building and refurbishment of the clubs had provided an economic boost to the area. Most interviewees also cited the different types of employment available at the venues and suggested many musicians now had almost full time work, which had been a rarity for them in the past.

The monies flowing from the Community Benefit Fund were seen as giving an economic boost to the community, but there was recognition of the need for expertise in the preparation of the submissions. Indeed, two of the local State Members of parliament conduct workshops and the Logan City Council also provides assistance in this area in recognition of the low skills base. There was also a view that the dispersal of these funds could be more closely aligned to the inputs from the EGMs of the Logan council area. Some interviewees argued that community benefits could only be maximized if all EGMs were held by not-for-profit organizations, and the money then invested back into the community.

Logan City Council's interest in the effect of the introduction of EGMs on the community first arose when they noted that the year after the introduction of poker machines, the local council rates arrears increased 10% and the complaints about untidy yards also increased by the same amount. Whereas once the local community had discretionary spending to afford mowing services, after the depletion of funds, yards went uncared for. Local community members complained of the drop in house prices as those affected by gambling debts would sell their house at the cheapest price to clear the debt.

Local businesses, both retail and hospitality, have noted problems with the increase in gaming machines. One local government representative spoke of local corner stores reporting an increase in demands for credit for milk and bread. A banking sector representative stated that numbers of the clients who request short term emergency funding, and have account histories that show multiple withdrawals at gaming venues, are turning to "pay day" lenders to assist them. This becomes apparent when the pay day lenders notify the bank of defaults. This respondent noted that the withdrawals are not occurring at the local supermarket or retail district. Local charities and not-for- profit groups have reported a loss in donations and those restaurant near to the gaming venues close. Other subjects reported a change in the make-up of the retail environment, in that there has been a proliferation of cheap discount stores. The Logan City Multicultural Neighbourhood Centre reports approximately 50% of their weekly requests for emergency relief can be attributed to gambling- related issues.

One of the more disturbing findings is the negative effect gaming is having on children. Many of the poker machine facilities advertise "free child minding", and this is touted as a community benefit. However, this child minding is not subject to the same regulations as daycare and child minding businesses are, thus leaving the child in a situation of potential danger in terms of who is caring for them and their educational and physical development.

Respondents spoke of children being left in minding for periods up to 11 hours. It is also important to note that this service is not available to the community at large, only to those who partake of the gaming facilities.

The presence of ATMs at gaming venues also impacted negatively on the children. One of the subjects, a bank employee responsible for short term loans, reported that provision for the children was often the reason for requesting emergency funding. However, upon receipt of these requests the client's account histories are consulted and it becomes apparent that the client is withdrawing all available funds from an ATM at the gaming venue. The banking institution denies further funding, and the clients are left to consult welfare agencies. The unintended consequence of child minding is also possibly the reason for a rise in the numbers of youths applying for help as a consequence of gaming activity. One of the welfare based respondents suggested that children who are being left on a regular basis in gaming venues become socialized in that environment and are more likely to have problems with gambling at an earlier age.

Another issue that interviewees felt strongly about was the type of activity around gaming. While clubs and hotels promote EGMs as a social activity, the community sector interviewees disagreed and perceived the playing of "pokies" to be an individual activity. Many of those interviewed argued that using EGMs was not a social activity, but a solitary activity carried out in a public place. The focus group participants also argued that communities were being asked to support individuals rather than the community.

Interviewees also cited the hazard in the "innocuous" nature of the EGMs, and argued that people were often in deep difficulty before they really understood how problematic their situation was and sought help. It was suggested that EGMs had also attracted a new group of people to gamble – for example, women who would not have attended horse racing.

The community sector and the public policy advisors believed the impact of the individual harm experienced by problem gamblers fell on the community, as people sought assistance from community organizations for support following the loss of money, housing and goods through gambling. They also cited the fact that a person could smoke and receive free child care and free transport to some clubs to gamble, but none of this was available for the workplace. "You don't get free child care to go to work".

There was also concern in the community and public sectors about the health and safety issues of the environment both for workers and the general public.

Community workers gave examples of cases where people had lost large sums of money before they sought assistance. Sums of money lost through poker machine gambling cited were in the region of $5-$10k. Interviewees believed that the community bore the cost of this financial loss through job losses, lack of local spending and constant demands for assistance.

Issues raised by members of the Liquor Industry Action Group included poor management skills in smaller clubs, and the consequent breaches of both the Liquor and Gaming Acts because of this lack of knowledge and expertise. This problem was not considered rectifiable by either training or mentoring because the clubs were too small and unprofitable to sustain full-time staff. The facilities in such small places were generally very poor. However, the larger clubs were able to conform to the Act and bring more community benefits.

Conclusions: The Limits of Evaluation and Effects on Policy

The evaluation undertaken, though methodologically sound, and as comprehensive as possible given the data and time restrictions, does not allow the quantitative comparison of harm with benefit. Benefits are usually clear and visible, harm often unclear, hard to measure and hard to get data for. In this scenario, it is likely that the policy of expanding gambling activities is likely to continue, and Governments are unlikely to really want to undertake the work necessary to generate data for a comprehensive quantifiable study, because of the potential implications for taxation revenue.

Clearly, there are many potential effects (both positive and negative) from EGMs, that would need to be conceptualised within a holistic framework. One way to conceptualise the growth of EGMs in Queensland is as an “investment of capital” (the machine itself) into the local area / Queensland. This approach then allows examination of the effects in the same way as Foreign Direct Investment can be evaluated. Hood and Young (1984) summarised the potential effects of FDI under the five headings of employment (quality and quantity), competition, dependence and truncation (over-reliance on activity by economy which could prevent other activities developing in the future), trade (imports and exports), and resource transfer (which concerns the transfer of capital, technology, management and production techniques from incoming multinationals into (or out of) the host economy). Young et al (1994) also split the potential effects into the direct static effects of FDI through the abilities of the multinationals themselves, and the indirect dynamic effects on suppliers, customers and competitors. In reality, there are many inter-linkages between these, but it does allow a simple framework to be created. In the case of FDI, the degree to which benefit or cost is created depends on the behaviour and strategies of the companies involved and their interaction with government policy. Utilising this approach for EGMs, a grid system can be generated, with the headings of effect against direct and indirect types, and policy as the assessable third vector (or axis), given that it is this third vector that determines whether cost is being minimised / benefit is being maximised / the trade off between the two. This allows the creation of the following simple model:

Simple Model of Effects from EGMs

EFFECT :	DIRECT	INDIRECT	POLICY
Employment	Created by EGMs and multipliers	Changes in rivals' and other industries' employment	*Location of EGMs, Size of Establishments, Allowed Behaviour (e.g. opening hours, etc.)*
Competition	Of EGMs on rival sectors	Spending on EGMs – How this affects other sectors	*Location of EGMs, Size of Establishments, Allowed Behaviour (e.g. opening hours, etc.)*
Dependence and Truncation	Directly via number of jobs, revenue, taxes	Change in rivals' and other industries' jobs, revenues, taxes	*Location of EGMs, Size of Establishments, Allowed Behaviour (e.g. opening hours, etc.)*
Trade	Expenditure into State / LGA from outside for EGMs v. Expenditure out for EGMs	Expenditure into State / LGA from outside for industries affected by EGMs v. Expenditure out for EGMs	*Location of EGMs, Size of Establishments, Allowed Behaviour (e.g. opening hours, etc.)*
Resource Transfer	Revenue, Profits, Taxes Out from EGM v. Tax funded activities and CBF money in	Resources in v. Resources out of area as a result of EGM generated changes in behaviour (e.g. spending, health, crime etc.)	*Location of EGMs, Size of Establishments, Allowed Behaviour (e.g. opening hours, etc.)*

Essentially, the policy vector (Location of EGMs, size of establishments, allowed behaviour (e.g. opening hours, etc.)) has influence on all of the effects. However, a key problem with the current analysis of many of the effects is calculating the counterfactual, i.e., what would have happened without the EGMs. Data difficulties also make analysis difficult in a number of areas. Given that a full, definitive analysis of community benefit and harm is not therefore possible, it will be necessary to begin to build such an analysis. The Resource Transfer category allows such an analysis. Analysis of the policies adopted towards EGMs, in terms of how they relate to resource transfer, has produced the first level of analysis of community benefit and harm, and also identified where future research will need to develop (and crucially what is required in terms of data to facilitate this). In the case of resource transfer, therefore, the following areas for research can be identified:

- An initial analysis of the factors leading to spending on EGMs (both of itself and relative to other forms of gambling), in order to determine

what factors policymakers could / should take into account when deciding on EGM location.

- Analysis of the factors linked to location and concentration of EGMs in terms of their strengths in determining the amount of revenue / profit / tax from EGMs in Queensland.
- Comparison of these revenues with gambling funded resources coming into areas.
- Evaluation of EGM policy indirectly on communities, on aspects such as debt, crime, health, rent arrears.
- Generation of alternative policies to those presently being enacted, that may increase community benefit / reduce community harm, in the area of resource transfer.

Further research needs to be undertaken to examine effects of trade, employment, competition and dependency. This model does, however, allow categorisation of the potential effects of gambling, allowing us to define what further evaluation needs to take place to provide a full picture.

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