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The public management issues of access to electronic gaming machines (EGMs): a case study of policy in Victoria, its effects and requirements for evaluation

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**The Public Management Issues of Access to Electronic Gaming Machines
(EGMs): A Case Study of Policy in Victoria, its Effects and Requirements
for Evaluation**

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The Public Management Issues of Access to Electronic Gaming Machines (EGMs): A Case Study of Policy in Victoria, Australia. Its Effects and Requirements for Evaluation

Introduction

Wynne and Schaffer (2003) have highlighted both the strong growth of gambling activity in recent years, and the revenue streams this has generated for governments and communities. Gambling activities and the revenues derived from them have, unsurprisingly, therefore also been seen as a way in which to increase economic development in deprived areas (Jinkner-Lloyd, 1996). Consequently, according to Brown et al (2003), gambling is now a large taxation revenue earner for many western governments, at both federal and state levels, worldwide (for example UK, USA, Australia). In size and importance, the Australian gambling industry in particular has grown significantly over the last three decades, experiencing a fourfold increase in real gambling turnover.

There are, however, also concerns expressed about gambling and Electronic Gaming in particular, as illustrated in economic, social and ethical terms in Oddo (1997). There are also spatial aspects to understanding these issues. Marshall's (1998) study, for example, highlights that benefits from gambling are more likely to accrue at the macro as opposed to the local level, because of centralised tax gathering and spending of tax revenues, whilst localities may suffer from displacement of activities with higher multipliers than the institutions with EGMs that replace them. This also highlights a regional context of costs, where benefits accrue to the centre, but the costs accrue to the regions and localities, as simultaneously resources leave those communities through both the gambling activities themselves (in the form of revenue for the EGM owners), and the government (through taxes).

Many studies also show the regressive nature of gambling spending against income generally, with lower income groups spending proportionately more than higher income groups on the activity. Hence 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). More recently, work by Worthington et al (2007) on Australia has shown that socio-economics, age, ethnicity and household composition, but also source of income (whether from salaries, self employment, investments, superannuation of benefits) are important. In particular, for EGMs they found a positive relationship between expenditure and household heads between 50 and 59, number of usual residents, and households in NSW, and negative relationship with household heads from North Africa and the Middle East (perhaps associated with culture), self employment, those with pensions as the principal source of household income, and households from Western Australia.

Increased gambling can also reduce taxation revenue from other sources, because of the opportunity cost impact of decisions to gamble, i.e. what would have otherwise happened to the money spent on the gambling product (see Moore 1994, Borg and Madson 1993). It is also seen as a relatively inefficient mechanism for raising taxation revenue (Borg and Mason, 2001). Studies also show that lotteries and EGMs can encourage gambling by previous non-gamblers (Syal and Morse 1995, Shepherd et al 1998, Balabanis 2002), Brown et al (2003) arguing that lottery participants, frequenters of betting shops, and EGMs also have a more compulsive element than other forms of gambling, potentially exacerbating opportunity cost issues. Baron and Dickerson (1999) also highlight the positive correlation between alcohol consumption and impaired control of gambling behaviour, highlighting an issue of the location of EGMs in licensed premises.

This review of gambling research highlights, therefore, that *access* to gambling products and the revenues derived from them are areas of increasing public management and policy interest and focus. *Access* is therefore a broad topic that encompasses several elements. This study focused on the following key policy issues and questions in order to provide an evidence base in future formulation of policy regarding EGMs in Victoria, Australia, and was funded through the Victorian Government's submission based Grants System for Gambling Research 2006 pilot which explored the themes of accessibility to gambling products. The paper therefore focuses on the following:

1. It evaluates the importance of access-to-EGM-related issues of location and demand for EGM products.

2. It examines how these effects of EGMs can be mitigated or exacerbated by access to EGMs and the revenue resources they generate.
3. It further develops a policy-assisting evaluation model for EGM gambling impacts.

Access Related Literature

The literature indicates that the impacts of gambling are strongly linked to access-related factors such as the socio-economic and geographical nature of the areas in which gambling occurs, the characteristics of people who gamble, and the length of time the venue has been open. Abbot and Cramer (1993) found in the Midwestern United States for example, that men spent more than women, urban residents spent more than rural ones and the poor spent a greater proportion of their income on gambling than did middle income earners. They also found, however, that both gamblers and non-gamblers supported more gambling, seeing it as a benign leisure activity, though 10% of gamblers reported family problems related to the activity.

Perdue et al (1995) also found that rural residents' support of gambling as a tourist development strategy (where the communities were economically depressed and previously reliant on mining) was a function of the perceived impacts of gambling, but also the type of contact between the residents and gamblers, with positive perceptions relating to jobs for local residents, recreational and cultural opportunities, and preservation of local heritage, and negative impacts from increased cost of living, traffic congestion, crime and noise. Perdue et al's (1999) later work also highlighted that the rate of growth of gaming was an important factor in determining effects, but also highlighted that local residents attitudes were particularly important where the main purpose of the gambling activities were linked to increasing tourist activities.

Jinkner-Lloyd (1996) highlighted that introducing gambling activities can assist economic development, but that this often depends on whether a city has something to lose. The greater is the extent of competition between gambling venues and between gambling venues and other leisure activities (e.g. restaurants etc.) which undertake the same activities, the greater will be the displacement effects. Rephann et al (1997) also found that where gambling was introduced to economically struggling counties, that it did generate economic

benefits, but that leakages out of the local economy (in the form of taxes, profits, etc.) severely limited these advantages. Siegel and Anders (1999) also found, that, whilst they generally did not find evidence of displacement between riverboat gambling and retail establishments, did find a substitution effect between gambling and other forms of entertainment (rather than being complementary to it), suggesting that displacement effects are most likely in these types of activities, which might also be related to tourism.

Schissel (2001) also found, in Canada, that youth gambling was a particular problem, and linked to feelings of disempowerment, with the consequence of acting as a regressive tax on poor, marginalised, young members of the community. Room et al (1999) concluded in their study that the problems from gambling were manifesting themselves at the private individual and family level. This can be seen in comparison with the benefits which are often measured at the public, government and company level, highlighting a need to examine a range of levels of impact (Eadington, 2003). This is an issue also raised by Poulin (2006), who also highlighted the inequity of a situation where governments and those who do not gamble are the greatest beneficiaries, whilst often poorer socio-economic groups pay the highest costs both individually and as communities. This highlights a clear need for gaming locations to be responsive to community concerns about gambling, as Pitcher (1999) highlights, particularly where there are perceptions that governmental benefit from gaming expansion, through taxes, has made the policy makers tacit partners in gaming.

Conversely, Rose's (1998) review of the gambling literature found that the evidence was strongest in favour of the benefits of gambling, though there were clear access differences, in terms of the types of activities and location. Grant et al (2004), found, for small Indian reservation gaming venues (i.e. excluding larger casinos) that there were overall benefits for the local community, because of their ability to attract out-of state consumers and local (tribal) control over spending of the proceeds. As a result there were increased inflows of revenue, employment, and social investments in health and education. Mehta (2007) also highlighted for Tunica Mississippi, where this rural (and previously economically deprived) area has a concentration of casinos, employing 15,000 people directly and indirectly, for both local and inter-state workers, generating \$48m (4% of total) revenues that are used for senior citizen home repairs, the public school budget and recreation centres.

McNeilly and Burke (2000) and Bilt et al (2004) also highlight that gambling may offer social support to older people, because of its social nature in bringing people together, and the subsidised amenities that could be accessed (such as cheap meals), in comparison with the isolation often found amongst this age group who no longer work. This highlights that social capital and network development is also an important element in this debate. A key merit of this approach is that it shifts the focus of analysis from the behaviour of individual agents to the pattern of relations between agents, social units and institutions. In essence social capital refers to the network ties of goodwill, mutual support, shared language, shared norms, social trust, and a sense of mutual obligation from which people can derive value (Putnam, 1993; Coleman, 1988; Woolcock, 1998).

In terms of gambling specifically, Griswold and Nichols (2006) found in Metropolitan areas of the United states, for example, that a casino's presence significantly reduces social capital (measured by trust, civic, volunteerism, group participation, giving, and meeting friend / family obligations) when located within 15 miles of a community, implying that casino location is crucial in determining impact in this regard. Conversely, Pitcher (1999) also highlights that amelioration policies are of crucial importance in this regard, through sponsorship of local events that may attract tourists (but also benefit the local community), hosting of charitable fundraisers and promotional events in the communities in which they sit.

Methodological Framework

This analysis of the literature, therefore, highlights, that gambling in general and EGM gambling in particular, is neither good nor bad of itself, but is context dependent, in terms of the extent and nature of the supply of EGM activity, but also the locality in which the activity sits, who undertakes the activity, how its inputs are resourced and how the subsequent resources (more particularly transfers) generated are distributed and used.

More specifically, the review highlights a range of access-related factors linked to location (urban-rural, socio-economic status of locality, mix and extent of alternative leisure activities, age breakdown of residents, crime, degree of existing social capital building activity (e.g. volunteering) and also how and where the proceeds are spent (taxation, profits, surpluses).

This highlights a clear need, therefore, to focus on these issues when evaluating the Victorian EGM context. This is clearly an area, therefore, where government policy plays a major role and thus evaluation of it is required. Livingstone (2005) outlines the history of EGMs in Victoria, from the inception of EGMs and a casino (in Melbourne) in 1991, and the expansion of gambling venues in the 1990s, to social clubs and hotels / pubs (split on a 50:50 basis). This expansion meant that by 2003 there were 27,260 EGMs in 540 venues (split equally between pub and hotel venues), excluding the 2,500 in the Melbourne Casino (which operates according to a different taxation regime). The revenue from the machines is split 1/3 if it is a club venue or 25% to a pub / hotel and 8.3% to a Community Support Fund, 1/3 to the machine operators (Tattersall's and Tabcorp), and 1/3 to the state (providing around 10% of Victoria's own tax revenues) (Livingstone, 2005). Livingstone (2005) also points out that, in suburban local government areas affluent areas have fewer machines than disadvantaged ones, as EGMs are deployed to maximise revenue, and for the most part, the players are local. This correlation between EGM location and socio-economic status is also seen by Marshall, (1999) for Adelaide, Baker and Marshall (2005), for Melbourne (as well as Sydney), and Marshall and Baker (2001, 2007) for Melbourne. In addition, they point out that "involved gambling" is less related to socio-economic status and more to proximity (involved gamblers are located less than half the distance to their regular venue than the average), and opening hours (both hours per day and days per week), clearly highlighting the importance of access.

Distilling the ideas contained within the review of the literature seems to highlight the need for the following analysis:

1. The gambling access "input" environment (in terms of venue size, numbers of machines per person, spend per person, etc.) and the extent to which it is determined by interactions between government policy (in terms of EGMs allowed, used of funds generated, etc.), the industry (EGM suppliers, hotels and clubs and their strategies) and the local socio-cultural-economic environment (numbers of people, their concentration, ages, income per head, tourism, activities, etc.),
2. Potential gambling access "outputs", including factors such as community benefit resources, tourism, volunteering, and government spend on problem gambling services, crime and drug-use and the extent to which gambling access-related factors impact on these

The most recent (2006) survey data available related to the EGMs themselves (gathered from the Victorian government Department of Justice website) and associated data obtained from the Australian Bureau of Statistics 2006 census website is used. In particular, the following data is obtained: -

- EGM locations (numbers per authority, distance between them / population in area, etc.)
- EGMs per venue / locality
- EGM income per venue / locality
- Breakdown of spend per EGM site /locality
- Local population numbers (those above 16/18; other age ranges); income per head; wealth per head
- Tourism statistics (both internal Australian and external)
- Crime Statistics (directly related to gambling if possible, gambling-related generally if not)
- Health Statistics (Gambling addiction)
- Volunteering-related statistics
- Community-Benefit Fund statement related data

The data is gathered for all 79 Local Government Areas (LGAs) in Victoria, missing data necessitating an amalgamation of some LGAs together to give 71 sets of data in total. Further data cleansing was then required, given that some LGAs were very small and did not have any EGM locations within them. Ultimately, 62 sets of data were deemed usable.

In order to identify the strongest potential causal variables, step-wise multivariate quantitative analysis is therefore required. This identifies those variables which are individually statistically significant and also maximise the overall R squared for the equation as a whole. This was deemed necessary because of the large number of theoretically important variables, with a limited number of cross-sectional observations (62). This forms the second part of this stage one activity, through which a framework for evaluating the socio-economic impact of gambling can begin to be further developed.

Results

EGM Access: Input Supply Results

(1) EGMs per 1000 adults

Constant	Unemployment	Overseas	Median Income	Adjusted	Durbin-	F-
6.184	Rate	visitors	-0.291 (**)	R-	Watson	Statistic
(*)	0.435 (**)	0.331 (**)		Squared	Statistic	17.824
				0.453	1.432	

EGMs per adult were positively correlated with visitors from outside Australia, unemployment rate and inactivity, and negatively with income. Regression analysis results show that the highest multiple correlation (adjusted) R squared result shows that just over 45% of the variation in number so EGMs per adult can be explained by the unemployment rate, overseas visitors and income levels (the inactivity variable not being found to be strong or significant), further suggesting positive links with tourism activity, but also with unemployment levels and negatively with income. This gives further support to previous research in the literature that gambling and income levels are regressively connected.

(2a) EGMs per venue

Constant	Volunteers			Adjusted	Durbin-	F-Statistic
80.799	-0.715(**)			R-	Watson	62.661
(**)				Squared	Statistic	
				0.503	1.879	

The regression analysis further suggest that volunteering activity and organisation has a negative impact on industry policy in terms of EGM venue size, if volunteering was seen as presenting an alternative activity to EGM gaming. It could also mean, however, that EGM activity has a massive negative effect on volunteering because they can be substitutes for each other. Given this possibility, the regression analysis was also undertaken excluding volunteering as a possible causal variable.

2b) EGMs per venue

Constant	Median	Median	Economic	Adjusted	Durbin-	F-
131.526	housing loan	income	Inactivity	R-	Watson	Statistic
(**)	repayments	-1.052 (**)	-0.496 (**)	Squared	Statistic	13.526
	0.953 (**)			0.381	1.874	

Excluding volunteering highlights that again, income is a regressive influence on EGM concentration, this time in terms of venue size, but with higher levels of inactivity associated with *smaller venues*, and higher housing loan repayments associated with larger ones. Overall, this *explains 38.1 % of the variation in venue size*.

(2c) EGMs per venue per 1000 adults

Constant 2.367	Unemployment Rate 0.357 (**)	Overseas Visitors 0.248(**)		Adjusted R- Squared 0.188	Durbin- Watson Statistic 1.510	F- Statistic 8.063
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Finally, in this section, where EGMs per venue allowing for the population in which the venues sit (thus a combined measure of EGM concentration) is evaluated, then the overall adjusted R squared is relatively low, and the only significant links are found with tourism and the unemployment rate. Income, age and volunteering are not found to be significant explanatory factors.

EGM Access: Input Demand-Related Results:-

(3) Net EGM Spend per adult

Constant 298.917 (**)		EGMs per 1000 adults 0.724(**)	EGMs per venue 0.150 (**)	Volunteers -0.402 (**)	Adjusted R- Squared 0.936	Durbin- Watson Statistic 1.904	F- Statistic 296.43
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EGM spend per adult is positively linked, unsurprisingly with both venue size and numbers of EGMs per adult (concentration measures). Interestingly, volunteering is also a strong and significant potential negative causal variable. Again this may suggest that volunteering behaviour also mitigates EGM spending behaviours (though as previously there may be the opposite causal link that EGM spend reduces volunteering).

(4) Net expenditure per EGM machine

Constant		EGMs per	EGMs per	Volunteers	Adjusted	Durbin-	F-
112451.6		1000 adults	venue	-0.617 (**)	R-	Watson	Statistic
(**)		-0.151(*)	0.329(**)		Squared	Statistic	57.344
					0.735	1.791	

In terms of EGM spend per machine, again this is positively related to EGM venue size, but is negatively related to the EGMs per 1000 adults variable (the other measure of concentration). This indicates a strong access-related scale effect on spending within a venue, but the reverse from number of machines in the broader locality. As with EGM spend per adult, volunteering maintains a strong and significant (negative) relationship. This again lends support to volunteering as being a potentially strong substitute to EGM activity (though again there is also the potential that volunteering is strongly negatively affected by EGM activity). Conversely, unemployment, inactivity and age are not included in the final multiple regression of best fit though they may play a strong secondary role through their roles in determining the location of EGMs (both per 1000 adults and per venue).

(5) Net expenditure per EGM machine per 1000 Adults

Constant		Median	Unemployment		Adjusted	Durbin-	F-
14.393		Weekly	Rate		R-	Watson	Statistic
(**)		Disposable	0.344 (**)		Squared	Statistic	19.945
		Income			0.383	1.516	
		-0.393 (**)					

Where the dependent variable is spend per machine adjusted for adult population size, the best fit equation (with an adjusted R-squared of 0.383) contains median weekly income and unemployment rate. This therefore indicates a positive relationship with the unemployment rate and a negative relationship with disposable income, two measures of social disadvantage. Overall this suggests therefore that when we adjust expenditure on EGMs to account for the available population available to play, then this highlights the importance of the disproportionate location of EGMs in more highly socially disadvantaged areas, highlighting this measure of access as of importance (consistent with previous research in this area).

EGM Access: Output Effects

(6) Community Benefit per person

Constant	EGMs per 1000 adults	EGM expenditure per adult			Adjusted R-Squared	Durbin-Watson Statistic	F-Statistic
-6.006 (**)	0.596 (**)	0.374 (**)			0.858	2.271	185.586

Unsurprisingly, a strong link exists between overall community benefit resources generated from EGMs (as reported in community benefit statements), EGM expenditure and EGM concentration measured per adult.

(7) Overseas Visitors (as a proportion of the total population)

Constant	ABN Registration	EGM Per 1000 adults			Adjusted R-Squared	Durbin-Watson Statistic	F-Statistic
0.025 (**)	0.796 (**)	0.243(**)			0.7110	1.89	75.739

The regression equation for overseas visitors suggests a possible link between tourism and EGM concentration policy in terms of absolute numbers per head of population. The fact that no strong relationship exists between venue size and tourism, and the relatively stronger value of ABN registration (i.e. numbers of businesses) also suggests that the EGM link is tied in with broader vibrancy of place and activities variables (e.g. pubs, clubs, shopping, entertainment, etc.). This also suggests, however, that to a small extent tourism activity is mitigating EGM revenue generation for communities, through generation of revenue addition to that provided by the community's gaming itself.

(8a) Volunteering (Social Capital)

Constant	Expenditure per EGM	Median Age	Unemployment Rate	Median Housing Loan repayment	Median Individual Income	Adjusted R-Squared	Durbin-Watson Statistic	F-Statistic
0.202 (**)	-0.429 (**)	0.285 (**)	-0.180 (**)	-0.513 (**)	0.327 (**)	0.849	1.831	69.401

As can be seen, volunteering may be significantly negatively impacted upon by EGM gaming in terms of spend (but not venue-size affects), but clearly there is an issue here over causation (i.e. whether higher spend causes lower

volunteering, or vice versa). It can also be seen that volunteering is negatively affected by unemployment and housing loan repayments, but is positively affected by median income levels and age. On the one hand, therefore, volunteering, therefore, can be seen as negatively affected by EGM gaming activity. On the other hand it may simultaneously be the case that it also mitigates EGM-related activity

(8b) Volunteering (Social Capital)

Constant 0.051	ABN Registration 0.242 (**)	Median Age 0.452 (**)	Unemployment Rate -0.290 (**)	Median Housing Loan repayment -0.875 (**)	Median Individual Income 0.421 (**)	Adjusted R-Square 0.781	Durbin-Watson Statistic 1.851	F-Statistic 44.130
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If we excluding the EGM-based variables on the basis of causality, then this gives us the equation above, where volunteering is positively affected by age, ABN registration and income variables, but negatively affected by unemployment and housing loan repayments. Overall, this suggests that volunteering is disproportionately an activity for older citizens, employed / self-employed, and higher income earner.

(9) Problem Gambling spending per person

Constant -3.517	Expenditure per EGM -0.354 (**)	Median Age 0.332 (**)			Adjusted R-Squared 0.35	Durbin-Watson Statistic 1.374	F-Statistic 17.458
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The negative correlations with gaming expenditure highlighted above, are counter-intuitive if we treat the spend as directly linked with problem gambling itself (since we would expect greater expenditures on EGM as having a direct positive relationship on problem gambling and thus its spend). The fact that age is positively linked to problem spend suggests that there may be a focus on older age problem gambling (possibly as the impacts become clearer) and possibly lobbying effects (i.e. those able to lobby most have greater amounts spent on them).

(10) Cash related crime

Constant -13837.5 (**)	Drug possession 0.286 (**)	Median Income 0.404 (**)	Unemployment 0.245 (**)	Overseas Visitors 0.429 (**)	Adjusted R Squared 0.842	Durbin- Watson 2.265	F-Statistic 81.995
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The regression equation does not suggest that cash-related crime is impacted upon (at least directly) by EGM activity. Instead it seems more impacted upon by drug use (a potentially strong motive for crime), local income levels, tourism and unemployment.

(11) Drug possession

Constant 380.760 (*)	Cash- related Crime 0.413 (**)	Median Age -0.175 (*)	Unemploymen t 0.209 (**)	Oversea s Visitors 0.385 (**)	EGMs per venue - 0.242 (**)	Adjuste d R- Squared 0.776	Durbin - Watso n 2.522	F- Statisti c 43.244
Constant 827.122 (**)	Economi c Inactivit y -0.47 (**)	Disposabl e Income -0.278 (**)	Unemploymen t 0.367 (**)	Oversea s Visitors 0.689 (**)	EGMs per venue - 0.242 (**)	0.766	2.573	41.005

A key issue for the regression with drug possession as the dependent variable is whether crime is seen as a cause or consequence, given their close correlation. In the equations where it is left in or taken out, then EGM venue size negatively impacts upon drug possession, whilst overseas visitor numbers and the unemployment rate positively impact upon it. Where cash-related crime is treated as a potential causal variable then it is strong and significant also, as is median age (though negatively related). Conversely, where crime is not seen as a causal variable then economic inactivity and disposable income are both negatively related to drug possession. Focusing on EGM venue size, then there may be the possibility that larger EGM venues provide an alternative (including gaming but other activities as well) that may mitigate drug-taking behaviour.

Conclusion

Overall, therefore, a complex and nuanced picture is revealed by the analysis of EGM access issues. There appears to be a clear concentration of EGMs, in terms of absolute numbers, in low socio-economic areas, the other measure of concentration, namely EGMs per venue, intimately and negatively linked to a social capital based alternative use of time, namely volunteering. In addition, whilst expenditure on EGMs (both per adult and machine) is linked to EGMs per adult, venue size and (negatively) to volunteering, it is not linked statistically significantly, directly at least, to income and unemployment measures. When the population size of the location is taken into account through the expenditure per EGM per 1000 adults measure, however, this effectively highlights the EGM concentration in terms of numbers per person. Consequently unemployment and income levels do become strong and significant potential explanatory variables in ways consistent with existing research in the area.

Overall, therefore, as with Brown et al (2003), there can be seen to be evidence of a regressive link between low socio-economic status areas and gaming activity. Larger venue size can be seen as a potential mitigator, however, generating higher resources per EGM and higher spend per adult, consequently generating higher potential resources for community benefit. The other potential mitigator is volunteering activity, which can be seen to potentially reduce impacts from EGM spend per adult, per machine and as a proportion of income.

Larger venue size would therefore seem to be one way to maximise the spillover benefits from gambling in terms of capacity to provide community benefit from revenue raised, physical infrastructures developed and activities provided. This would need to be seen, however, in the context of further evaluation of the location of EGMs in low socio-economic areas, given that high unemployment and low income levels are also linked with low levels of volunteering, and thus where the greatest relative spend and deleterious impact from gaming may also be seen. Because there is also a strong negative relationship between volunteering and venue size, it is also necessary to further examine the role of volunteering as an alternative to gaming activity.

This also has to be examined in the light of the results of the impacts of gaming activity and the role of access in this aspect. The community benefit funds generated are unsurprisingly linked directly and positively to EGM expenditures. Tourism can also be seen to be linked to a small extent with EGM activity, but

not venue size (which would be more likely to create an initial attraction), leading us to postulate that generally it is overall entertainments, as well as retail activity, that are the real driving forces in tourism attraction, with EGM gaming representing a secondary activity once the tourist has been attracted. More positively, however, cash-based crime is not seen to be linked to EGM activity per se in the regressions generated, with drug-possession seen as negatively linked to venue size.

The major issue to come out of the quantitative research, however, is that volunteering may be, simultaneously, the variable with the most potential to bolster community resilience to the negative effects of gambling, and also a factor which is also vulnerable to EGM activity. There are clear links here with social capital, which need to be weighed, however, against the impacts for hotels, and particularly clubs, in creating, sustaining, and building community social capital. These results would seem to highlight a range of stakeholders and processes which need to be examined, encapsulated in figure 1.

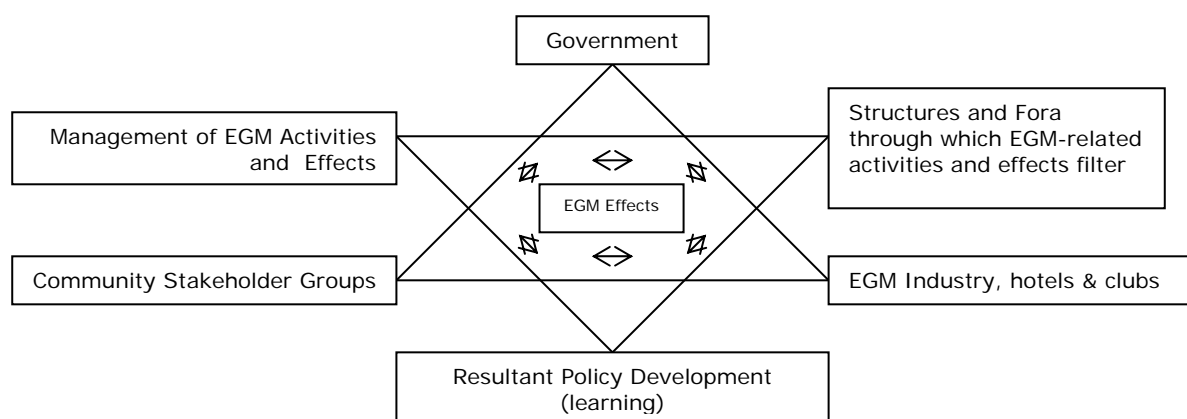


Figure 1 A Possible EGM-Effects Research and Evaluation Framework

This raises a key issue regarding where the resources generated from gaming are channelled, particularly those claimed in the community benefits statements completed by clubs and (previously by hotels as well), and the state government administered community support funds (from the 8.3% taken from hotels). In particular this seems to highlight the key need to more fully evaluate the activities of hotels and clubs in their use of EGM related resources, in order to create a more complete evaluation framework of use to policymakers.

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