

**TAKING THE GAMBLE: LOCAL AND REGIONAL POLICY ISSUES OF ACCESS TO ELECTRONIC GAMING MACHINES (EGMs): A CASE STUDY OF VICTORIA, AUSTRALIA**

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**ABSTRACT:** Gambling activities, and revenues derived, have been seen as a way to increase economic development in deprived areas. However, there are also concerns about gambling in general and Electronic Gaming Machines (EGMs) in particular, and the effects of access to these activities on the localities in which they are situated. This study explores issues of accessibility as they relate to EGM products in Victoria, focusing specifically on interactions between the location of, and demand for, EGM products. Results highlight potential two-way relationships between gambling and volunteering. Volunteering (and social capital more generally) may help protect against gambling. Alternatively and/or additionally volunteering may itself be damaged by increased gambling activity. This highlights the need for further exploration, particularly into how detrimental effects of EGMs may be mitigated in localities and beneficial impacts maximised by policy both related to the access to EGMs themselves and also the revenue and resources they generate.

**KEY WORDS:** Electronic Gaming Machines; gambling revenues; social capital; Australia.

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## **1. INTRODUCTION**

Wynne and Schaffer (2003) have highlighted both the strong growth of gambling activity in recent years, and the revenue streams this activity has generated for governments and communities. Gambling activities and the revenues derived from them have, unsurprisingly, also been seen as a way in which to increase economic development in deprived areas (Jinkner-Lloyd, 1996).

Consequently, according to Pickernell *et al.* (2004), gambling is now a large taxation revenue earner for many western governments at both federal and state levels worldwide (for example UK, USA and Australia). The existing literature, however, also highlights concerns about gambling and Electronic Gaming in particular, as illustrated in economic, social, and ethical terms in Oddo (1997).

In terms of the economic effects, Marshall's (1998) study highlights, for example, that benefits from gambling are more likely to accrue at the macro as opposed to the local level. This is because of centralised tax gathering and spending of tax revenues. Localities are suffering from

displacement of activities with higher multipliers than the institutions with the Electronic Gaming Machines (EGMs) that replace them.

Related to this, 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’ (Layton and Worthington, 1999, page 430). Increased gambling can also reduce taxation revenue from other sources because of the opportunity cost impact of decisions to gamble, that is, what would otherwise have happened to the money spent on the gambling product (see Borg and Madson, 1993; Moore, 1994). Consequently, gambling has been considered as a relatively inefficient mechanism for raising taxation revenue (Borg and Madson, 1993).

In terms of the social effects, studies also show that lotteries and EGMs can encourage gambling by previous non-gamblers (Balabanis, 2002; Shepherd *et al.*, 1998; Syal and Morse, 1995). Brown *et al.* (2003) argue that lottery outlets, betting shops and EGMs also have a more compulsive element than other forms of gambling, potentially exacerbating opportunity cost issues.

In addition, Baron and Dickerson (1999) acknowledge the positive correlation between alcohol consumption and impaired control of gambling behaviour, highlighting the issue of the location of EGMs in licensed premises. Rephann (2000), as part of a wider study of activities (including highways, dams, prisons, and nuclear power plants, as well as gaming casinos), highlighted that the location of gambling activities was therefore controversial because of its potentially deleterious social, economic, and local environment effects.

In some ways, therefore, the EGM industry has been seen to represent the classic problem of “privatisation of profits and socialisation of losses”. This is most obvious where the impact on communities is found and felt through the incidence of problem gambling, and the time spent addressing the impact of problem gambling on the individual and family and related problems.

Pitcher (1999) also suggests that, particularly where there are perceptions that governments benefit from gaming expansion through taxes, this has made policy makers tacit partners in gaming. Access to

gambling products and the revenues derived from them are, therefore, areas of increasing local and regional policy interest and focus. As such this topic can be seen to fit into existing debates around community opportunities and vulnerabilities (e.g. see Stimson *et al.*, 2001, Baum *et al.*, 2008).

Access is, however, a broad topic that encompasses several elements on which it can be difficult to access complete data (for example, see Rephann, 2000). According to Pickernell *et al.* (2004), the debates concerning gambling are in some ways more advanced in Australia, and this can be seen, specifically, in terms of those issues concerning the spread of EGMs, as illustrated by the work of Layton and Worthington (1999), Brown *et al.* (2003), Livingstone (2005), Worthington *et al.* (2007) and SACES (2001, 2005,a,b,c).

In both size and importance, however, the Australian gambling industry in particular has grown significantly over the last three decades, experiencing a fourfold increase in real gambling turnover. Livingstone (2005) outlines the history of EGMs in Victoria, from the inception of EGMs and a super casino (in Melbourne) in 1991, to the expansion of gambling venues in the 1990s to encompass 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 club 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 as follows: For clubs 33.3% (1/3) goes to the venue while for a pub / hotel, 25% goes to the venue and 8.3% goes to a Community Support Fund. For both pubs/hotels and clubs the remaining two thirds is split between the machine operators (33.3%) (Tattersall's and Tabcorp) and the state (33.3%) (providing around 10% of Victoria's own tax revenues) (Livingstone, 2005).

In order to utilise state-sponsored gambling activities to promote spending on 'good causes', some of the revenue generated from the gambling activity is also specifically focused. Victoria, for example, has a state-government level administered Community Support Fund (CSF) funded by revenue from the EGMs located in hotels and pubs. Victoria also requires clubs where EGMs are located to demonstrate the resources being put back, via Community Benefit Statements (CBSs) into 'community purposes' (Pickernell *et al.* 2010). The main point of this process is to ensure that club venues make a contribution to their

communities—an amount from their revenue that is at least equivalent to the 8.33 % of additional tax levied on hotels (that goes to the CSF).

The CSF resources in Victoria, administered by the state government itself, are spent as follows: problem gambling (the first call on the fund), treatment of drug issues, financial counselling and support for families in crisis, youth programs, community advancement, sport and recreation, arts, tourism, advancement of the community as determined by the minister, and costs associated with administering the CSF (Department for Victorian Communities 2006/07). \$AUD45 million per financial year is also provided for the government's drug strategy and one day's revenue is provided to the Victorian Veterans' Fund on 1 September annually.

Victoria's experience of EGM activity provides a very useful case study through which to explore a range of access-related issues surrounding these operations, which are of relevance in a wide range of contexts. This case study 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 aim was to provide an evidence base for future formulation of policy regarding EGMs in Victoria, Australia.

This paper therefore evaluates the effects of accessibility to EGM products in Victoria, Australia, focusing on the interactions between the location of and demand for EGM products. In particular the relationship between EGM activity and EGM access, and social capital and also the relationships that these factors have with the wider socio-economic environment of the localities in which the EGMs are situated will be explored.

The next section of the study examines the literature on access to gaming and the impacts this access may have on communities. The methodology section then highlights the basic framework for analysis, data gathered for the Victoria case study, and also the analytical techniques used in the (regression) analysis. The results are then outlined, followed by a discussion of their implications.

## **2. ACCESS TO GAMING-RELATED ISSUES**

Existing literature indicates that the impacts of gambling are strongly linked to access-related factors including 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 not only a function of the perceived impacts of gambling, but also the type of contact between the residents and gamblers. Positive perceptions related to jobs for local residents, recreational and cultural opportunities, and preservation of local heritage. Negative perceptions were concerned with impacts from increased cost of living, traffic congestion, crime, and noise.

Perdue *et al.*'s (1999) later work highlighted that the growth rate of gaming was an important factor in determining effects. In addition they found that local residents' attitudes were particularly important where the main purpose of the gambling activities was linked to increasing local and regional tourist activities. Similarly Jinkner-Lloyd (1996) emphasised that introducing gambling activities can assist economic development in cities, but that this often depends on whether a city has something to lose in the first place.

For example, the greater the extent of competition between gambling venues and other leisure venues (for example, restaurants, et cetera) which undertake the same activities, the greater will be the displacement effects, and the lower the benefits. Rephann *et al.* (1997) found that where gambling was introduced to economically struggling counties, it generated economic benefits, but 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, they did find a substitution effect between gambling and other forms of entertainment (rather than being complementary to it). This suggested that displacement effects are most likely in these types of activities, which might also be related to tourism.

Rose's (1998) review of the gambling literature found that the evidence was strongest in favour of the benefits of gambling. There were, however, clear access-related differences in terms of the types of activities and locations.

Grant *et al.* (2004) found that for small Indian reservation gaming venues (that is, excluding larger casinos), there were overall benefits for the local community, because of their ability to attract out-of-state consumers and to have local (tribal) control over the spending of the proceeds. As a result, there were increased inflows of revenue, employment, and social investments in health and education.

Mehta (2007) highlighted similar benefits for Tunica Mississippi. This rural (and previously economically deprived) area has a concentration of casinos, employing 15,000 local and inter-state workers directly and indirectly, and generates \$48m in revenues (4% of total) that are used for senior citizen home repairs, the public school budget, and recreation centres.

In terms of Australia, there have been a number of studies that have examined the social impacts of gambling. The Australian Productivity Commissions studies (1999; 2009), considered the question of social impacts. Livingstone (2005) points out that in the suburban local government areas of Victoria, 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 was also reported by Marshall (1999) for Adelaide, Marshall and Baker (2001; 2007) for Melbourne, as well as Baker and Marshall (2005) for Melbourne and Sydney.

Social capital may, however, be an important additional 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 (Coleman, 1988; Putnam, 1993; Woolcock, 1998).

Social capital, therefore, can be viewed as a multitude of things extending to relationships between people/neighbours. Conversely, EGM gambling is principally a solitary activity/occupation. Griswold and Nichols (2006), perhaps unsurprisingly, found that in metropolitan areas of the United States, for example, a casino's presence significantly reduces social capital (measured by trust, civic, volunteerism, group participation, giving, and meeting friend/family obligations) over time when located within 15 miles of a community. This implies that casino location is critical in determining impact.

Their study, however, only found this relationship at the 10% level of significance, and only at the overall measure of social capital—the study

being unable to find significant relationships with individual measures of social capital. Nevertheless, they also concluded that the causality of the relationship was that casino presence was reducing social capital, finding that the degree of social capital present was not influencing casino location, though they did call for more research into determining the precise relationship.

Analysis of the literature suggests, therefore, that gambling in general, and EGM gambling in particular, is neither good nor bad of itself. Instead it is context-dependent, in terms of the extent and nature of the supply of EGM activity, the locality in which the activity sits, who undertakes the activity, how its inputs are resourced, and which activities it substitutes for, as well as how the consequent resources generated are distributed and used.

Distilling the ideas contained within the review of the literature highlights the need for the exploration of the following topics in regard to the Victorian case data:

1. The extent to which access to EGMs both in terms of EGM numbers and venue size, is significantly related to the local socio-cultural-economic environment (income, unemployment, average age) as well as the location as a tourist destination.
2. The extent to which spending on gambling is related to this access to gambling environment in terms of government policy (in terms of the number of EGMs allowed in an area) and EGM industry decisions (EGM suppliers and their strategies in terms of venue size), as well as socio-economic variables (unemployment, income, average age) and the location as a tourist destination.
3. The ways in which social capital may be affected by this access to gambling environment (numbers of EGMs and venue size) in combination with the socio-cultural-economic environment (unemployment, income, average age, tourism).

### 3. METHODOLOGICAL FRAMEWORK

The most recent comparable survey data available related to EGMs (Victorian Government Department of Justice website, 2006) and associated data obtained from the Australian Bureau of Statistics (2006) census website was used in this study. In particular, the following data was obtained:

- EGM locations (numbers per authority, population in area, etc).
- EGMs per venue/locality.
- EGM spend per person.
- Breakdown of spend per EGM.
- Local population numbers (those aged above 18, other age ranges).
- Economic statistics such as income per head, unemployment rates.
- Social-Capital related statistics (proxied for by volunteering-related statistics). Volunteering was chosen as a proxy for social capital measures more widely (see Griswold and Nichols (2006), discussed earlier) in order to establish a measure from comparative data available across the LGAs.

The data was gathered for all 79 Local Government Areas (LGAs) in Victoria. Missing data necessitated an amalgamation of some LGAs 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.

A number of linear regressions were carried out, focused on the questions identified from the literature. These utilised the standard enter approach, with adjusted R squared, VIF collinearity statistics and F statistics reported, with significance levels. The coefficients on the variables reported have also been standardised for ease of comparison.

Of course, multivariate regression is not able to establish causality, unlike statistical techniques such as structural equation modelling. With regression the dependent variable and independent variables can be causes and outcomes or vice versa. In addition it was determined that causality could not be established, because the results were derived from one set of limited cross sectional data. The results are therefore discussed in order to highlight linkages and relationships between one variable and a set of others.

**4. RESULTS**

In terms of the extent to which access to EGMs, both in terms of number and venue size, is significantly related to the local socio-cultural-economic environment (income, unemployment, average age) as well as the location as a tourist destination. Very different variables exhibited a strong and significant relationship with the “EGM access” variables as is illustrated in tables 1 and 2.

**Table 1.** EGMs per 1000 adults

Constant	Unemployment Rate	Median Individual income	Overseas visitors	Median age of population	Adjusted R-Squared	Durbin-Watson Statistic	F-Statistic
6.545	0.430 (**)	-0.296 (*)	0.330 (**)	-0.009	0.443	1.437	13.140 (**)
VIF	1.865	2.123	1.313	1.556			

Note: \*\* = significant at the 1% 2-tailed level, \* = significant at the 5% 2-tailed level.  
Source: the Authors

Evident in Table 1, EGMs per 1000 adults was positively linked with the number of visitors from outside Australia (as a proportion of the local population) as well as the unemployment rate. There was a negative relationship between EGMs per 1000 adults and income (Table 1). The regression analysis result shows a multiple correlation (adjusted) R squared result of 44.3%. Therefore almost 45% of the variation in the number of EGMs per 1000 adults is ‘related’ to these three factors. This is consistent with previous research in the literature that shows that access to gambling and socio-economic locations are regressively connected.

**Table 2.** EGMs per Venue

Constant	Unemployment Rate	Median Individual income	Overseas visitors	Median age of population	Adjusted R-Squared	Durbin-Watson Statistic	F-Statistic
169.947 (**)	-0.045	-0.153	-0.068	-0.677 (**)	0.323	1.444	8.280 (**)
VIF	1.865	2.123	1.313	1.556			

Note: \*\* = significant at the 1% 2-tailed level, \* = significant at the 5% 2-tailed level.  
Source: the Authors.

In terms of EGM per venue, however, only median age is significantly linked, with older age areas having smaller sized venues. Overall this

suggests that EGM access is regressively linked to lower socio-economic status, but only in terms of the overall numbers of EGMs rather than how those EGMs are then concentrated in terms of venue size.

Examining the extent to which subsequent spending on gambling is related to access to this gambling environment in terms of government policy (in terms of the number of EGMs allowed in an area), EGM industry decisions (EGM suppliers and their strategies in terms of venue size), socio-economic variables (unemployment, income, average age) and the location as a tourist destination, table 3 illustrates the strong role that government and industry policy decisions play.

**Table 3.** EGM spend per adult.

Constant	Unemployment Rate	Median Individual income	Overseas visitors	Median age of population	EGMs per Venue	EGMs per 1000 Adults	Adjusted R-Squared	Durbin-Watson Statistic	F-Statistic
-252.750	0.228 (**)	0.076	-0.020	-0.072	0.371 (**)	0.627 (**)	0.887	1.826	80.456 (**)
VIF	2.257	2.303	1.558	2.312	1.659	2.016			

Note: \*\* = significant at the 1% 2-tailed level, \* = significant at the 5% 2-tailed level.  
Source: the Authors.

Table 3 shows EGM spend per adult as strongly and positively linked, unsurprisingly, with both venue size and numbers of EGMs per adult in the LGA (concentration measures). Interestingly, however, unemployment is also a strongly significant related variable, and also supports the view that EGM activity is more heavily focused in low socio-economic areas, though this is not replicated in terms of the measure for income.

In addition, given that the other measures are not significant in the regression shown in tables 1 and 2, their influence can therefore be seen as being more strongly related to their roles in determining the concentration of EGMs in an area, as measured by EGMs per 1000 adults and EGMs per venue.

Finally, turning to the ways in which social capital may be affected by this access to gambling environment (numbers of EGMs and venue size) as well as socio-cultural-economic environment (unemployment, income, average age, tourism), table 4 indicates that EGM activity may have a deleterious effect, but only via venue size.

**Table 4.** Volunteering (social capital).

Constant	Unemployment Rate	Median Individual income	Overseas visitors	Median age of population	EGMs per Venue	EGMs per 1000 Adults	Adjusted R-Squared	Durbin-Watson Statistic	F-Statistic
0.219 (*)	-0.423 (**)	-0.226 (*)	0.173 (*)	0.348 (**)	-0.456 (**)	0.103	0.721	1.932	27.335 (**)
VIF	2.257	2.303	1.558	2.312	1.659	2.016			

Note: \*\* = significant at the 1% 2-tailed level, \* = significant at the 5% 2-tailed level.  
Source: the Authors.

Volunteering is significantly and negatively related to EGM gaming in terms of venue size, though there may be an issue here over causation (that is, larger venues have caused lower volunteering, vice versa, or both). In addition, however, it can also be seen that volunteering is negatively related to unemployment and median income levels, but positively related to age and tourist areas.

Overall, this suggests that volunteering is disproportionately an activity undertaken in locations where there are relatively older citizens, more people employed, lower income earners, and within tourist areas. This provides some support for the Griswold and Nichols (2006) findings concerning casinos in the United States.

The picture that emerges, therefore, is one where higher spend on EGM gaming is related to concentrations of EGMs (in both absolute number and venue size) and lower socio-economic areas in terms of unemployment. It can also be seen that EGM concentrations (again in terms of both numbers and venue sizes) are themselves more likely to take place disproportionately in lower socio-economic areas, and where the inhabitants are from younger ages groups. These are, however, areas where social capital, in terms of volunteering, is also likely to be lower.

In terms of social capital, therefore, EGM activity can be seen to have a more deleterious effect in areas of higher venue size. However, EGM activity (in terms of spending) also tends to be concentrated in lower-socio-economic areas (particularly in terms of unemployment), where volunteering is also likely to be lower to begin with.

## 5. CONCLUSIONS

Overall, a complex and nuanced picture is revealed by the analysis of EGM access issues. There appears to be a clear positive relationship between expenditure on EGMs per adult and access issues in terms of the

number of EGMs per adult and EGMs per venue, and a direct negative relationship with lower socio-economic areas measured by unemployment.

EGM expenditure per adult is also linked to lower socio-economic areas indirectly related via the number of EGMs per adult in an area, itself linked to socio-economic variables such as unemployment and income. This suggests a need for more in-depth examination of issues related to the location of EGMs in low socio-economic areas, given that higher unemployment is also linked with lower levels of volunteering behaviours, and where the greatest relative spend on and deleterious impact from gaming may also occur.

Whilst it is not possible to establish causation in the relationship between volunteering and gambling from this study, it is possible that increased time spent gambling is at the very least “another straw on the camel’s back” in terms of reducing the access of young people to sports coaching by volunteers and / or reducing their demand for it, particularly in areas where labour market conditions (i.e. high unemployment) already mitigate against volunteering.

One possibility to come out of this quantitative research is that volunteering may be particularly vulnerable to higher levels of concentrated EGM activity in terms of venue size, and / or be an activity which is less likely to be undertaken in the areas with lower socio-economic status (in terms of unemployment) where EGM activity is often disproportionately concentrated. It will, however, also be necessary for future research to examine how the role of social capital building (and volunteering) might be bolstered in areas where EGM activity is concentrated, through the use of gaming-derived revenues.

One area of interest, for example would be on where CSF derived funds are generated and subsequently spent. Regional caps, discussed in SACES (2005a), limit certain areas on the number of EGMs that can be available for gaming. The Victorian Minister for Gaming determines the regions to be capped and sets limits on the number of EGMs that are allowed. Such regional caps are designed to protect vulnerable communities from problem gambling. Criteria for the selection are LGAs that are highly disadvantaged — having a significant number of machines and above average gaming expenditures. Currently, 20 Victorian regions are capped, including the City of Ballarat, City of Greater Dandenong, and City of Latrobe.

Cursory analysis of Ballarat, Dandenong, and La Trobe, however, highlights a potential disparity between payments into the CSF and resources received from it. EGM operating hotels in Ballarat, for

example, paid a combined \$1.4 million into the CSF during the financial year of 2006-07. In Dandenong, the figure is higher at \$4 million a year.

These municipalities, however, have not seen a proportionate amount of this revenue flowing directly back into the community, at least in terms of the details reported in the Department for Victorian Communities, (2007) Annual Report for 2006-2007. The Ballarat City Council received a total of only \$460,000 in the same year for community purpose and the Dandenong Council received just \$46,000 in total during the year 2006-07. The City of Latrobe has seen the biggest share of the three, in terms of CSF (\$1 million). Even here, however, local hotels contributed a total amount of \$1.47 million.

Consequently, the amount of monies leaving the community to the CSF is not reflected in the distribution of monies returning to the community through the CSF. While they form part of the service delivery regime for addressing gambling-related problems, access to problem gambling treatment services such as telephone counseling and on-line services cannot be factored in as part of this study.

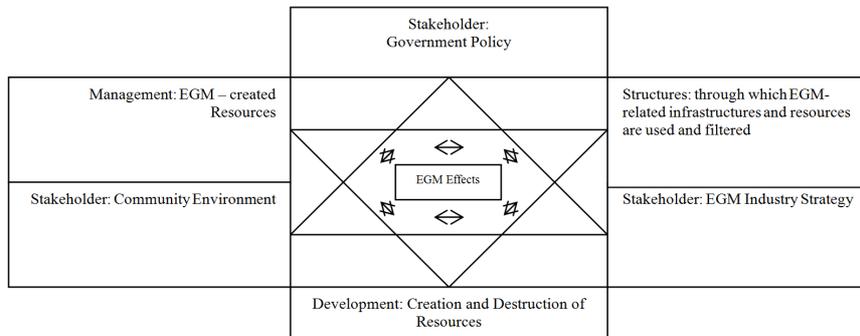
The CSF will also fund community gambling services and be directed to other community projects. However, relative to what flows into the CSF from these three regions, it appears that less is being returned to their local governments for community purpose.

This may indicate a significant issue in planning for expenditure on community development activities and services. It underscores the leakage of gambling revenue out of the community and also highlights the importance of building on the findings of this paper in relation to who gambles and their socio-economic circumstances, with a similar analysis of regional inequalities with regard to policy decisions of government into how CSF funds are allocated.

This is important because CSF is potentially one vehicle (along with the CBS funds of clubs) to contribute to regional/local amenity and thus to build social capital, indicating the importance of examining the CSF and where revenue is raised and spent. Pitcher (1999), for example, highlights that amelioration policies from gaming-derived revenues may have an impact on social capital, potentially altering the overall impact from gaming to an extent through sponsorship of local events that may benefit the local community in which they sit. 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).

Pickernell *et al.* (2004) argue, and Pickernell *et al.* (2010) also support the view that geographically disparate costs and benefits are imposed by gambling, and thus a geographically-disparate policy for using the resources may also be valid, increasing the resources channelled into areas where the negative impacts from gaming are larger.

This would impact upon state-level designated CSF resources as well as those encapsulated within more locally focused CBS resources. Overall, this study reinforces the need for the full range of stakeholders, processes, and effects from EGMs to be analysed. This multiplex framework is encapsulated in Figure 1.



Source: the Authors.

**Figure 1.** A possible general EGM-effects research and evaluation framework.

There is therefore a crucial need to examine how EGM-created resources are managed, the physical and social infrastructures through which these resources flow, and the effect of all these processes on the development and destruction of different types of physical, financial, and social resources within the communities in which EGM activities sit.

Poker machine incidence is, at least partly, a function of disadvantage. The way in which this interacts with volunteering and social capital more broadly, however, runs up against the issue of cause and effect.

Exploring this in more detail would require specific case studies to explore how gaming impacts affect voluntary organizations. In terms of specific future research, therefore, exploring the activities of, for example, EGM venues themselves in affecting the creation or destruction

of social capital-related factors, would need an in-depth qualitative case study approach.

This research, therefore, opens up new areas for research, especially in terms of analysing the use of funds for community benefit and evaluating what the clubs actually do with the resources from gaming. If government policies continue the trends seen in the literature and results of this paper (high EGM concentrations in low socio-economic areas), these areas may see reductions not only in their financial resources but also in their social capital reserves. That would seem to be a gamble not worth taking.

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