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Submission to Brisbane City Council

DRAFT BRISBANE ECONOMIC DEVELOPMENT PLAN

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Submission

This submission will focus on the following two elements of the issues related to gambling, with specific focus on the impact of Electronic Gaming Machines (EGMs):-

- the economic impacts of the gambling industries, including industry size, growth, employment, organisation and interrelationships with other industries such as tourism, leisure, other entertainment and retailing;
- the contribution of gambling revenue on community development activity and employment;

The submission will focus on the existing gambling related literature and findings from a study conducted by the authors of this submission. The research findings indicate a need for an evaluation framework which takes into account the full range of inter-related social and economic effects from electronic gaming, including not only the direct contribution of gambling revenue on community development activity and employment, but also the ways in which the mechanisms through which it is used also encourage social and network capital development.

The broad literature indicates that the social and economic impacts of gambling are strongly linked to 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. Poulin (2006) also raises the issue that in terms of distribution of risks and benefits from gambling, government, and those who do not gamble are the greatest beneficiaries and those often poorer socio-economic groups who do gamble, pay the highest costs both individually and as communities.

Perdue et al's (1999) work also highlighted, however, 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) also concluded that introducing gambling activities can assist economic development, but that 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 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.

Examples from the Australian Experience

For Australia Livingstone (2005) has argued that gambling does not produce more consumption. Instead, he argues that it substitutes one form of economic activity for another, quoting a SACES (2005) study that found that by comparing Victoria with Western Australia (where there are no pub or club EGM venues) that gambling produces 3.2 jobs per $1m compared with 8.3 jobs per $1m of income from beverage sales, and 20.2 jobs per $1m from food and meals, possibly as a consequence 10 persons per 1000 working in cafes and restaurants in W.A (and 15.9 per establishment) compared with 8 (and 12.7) in Victoria, the employment figures per licensed establishment being 16.3 in Victoria and 13.6 in W.A. suggesting a shift in employment rather than any addition.

Penge (2000) also calculated (for EGM spending in the Bendigo area) that the Type 2 (direct and induced effects) multiplier for output was 1.28, the income multiplier was 1.77, the employment multiplier 1.64 and the value added multiplier 1.63. All these results were, however very low in comparison with most other sectors in the economy, not least because of the initial leakage of more than 2/3 of the revenue from the region (in state government taxes and machine operator revenues). Examining the opportunity cost issue via hypothetical extraction (i.e. "closing down" sectors in the economy, such as gaming and others) to compare the impacts on the economy of substituting EGM for spending decisions on other sectors (see Penge, 2000 for further details of the technique as it is applied to EGMs), then for the Bendigo case study, Penge (2000) illustrates that EGM spending in the Bendigo economy ($32.35m at the time of the study), after accounting for what the money would have been spent on if not in EGMs. The Penge calculations assumed that alternative spending patterns would have been in line with average household expenditure, that $A2m was re-input into the economy from EGM owners and operators (through maintenance and profits), no use of savings to fund spending or increased government spending from taxation, and that 10% of EGM spend came from visitors. The effect on the regional economy were losses of $5.33m in output, $7.446m in income, and 237 jobs. Penge (2000) then added in the cost of negative externalities created by problem gamblers and the loss of productivity by problem gamblers, as well as benefits caused by within-region EGM activities substituting for external gaming (reducing leakages $2.2m of the $32.35m) and the increased spend in the local economy from visitors coming to gamble. Overall, this created a total net loss of $11.57m, which is greater than the $10.78m (1/3 of revenue) that could be expected to stay within the community through clubs and hotels (if we assume that the government's Community Support funds allocate resources back proportionately, something that Brown et al's (2003) study did not, however, find to be the case for Queensland in their similar matched-funding proposal submission allocation system for this part of the revenue stream). Thus the Penge (2000) analysis would suggest that for individual regions the economic impact of EGM spending itself is likely to be actually negative for the economy, rather than merely redistributive.

Clearly, however, the results strongly depend upon the opportunity cost issue of the initial spending decision, as well as where those inputs of financial resources into EGM activity came from. Briefly restating the literature, Doughney and

Kelleher (1999) have also argued that the purported net benefits of gambling to Victoria are based on “shaky” methodological ground, because it assumes that gambling has been financed from saving rather than substituted alternative expenditures, under-reporting of gambling activity in the Australian Household Survey, as well as the externalities of additional government services required to deal with deleterious social effects from gambling, and reduced strength of the social fabric (and social capital). They also argue, however, that EGM expenditures are, based on other surveys, likely to be funded (and therefore substituting) approximately 20% from savings, 20% for other entertainment activities, 15% from household necessities, and 15% from other personal items, the other 30% accounted for from discretionary spending and increased paid work. This is a different assumption to Penge (2000), and may be seen as more accurate by narrowing down the likely substitution effects more realistically to a smaller number of key sectors within entertainment, retail, manufacturing, and also raising the possibility that a relatively large proportion of the financial input may come from savings and increased work, reducing savings-related resources for investment, but also potentially raising economic activity (though in all likelihood to a small degree). The “tourist issue” is also an important issue, in terms of injecting resources that would otherwise not have been available to a region.

Overall, those who benefit from EGM activity in economic terms, therefore would seem to be the state government, EGM owners, the hotels and clubs who operate the machines, and those able to access the Community Support Funds, whilst the EGM inputs are in essence paid for by other industries and non-EGM operators in the hotel and club sectors in the region, in the form of reduced spending.

A Quantitative Analysis of Victoria

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

- 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.).
- 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 Commission for Gaming Regulation 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 aged above 16 – 18; other age ranges); income per head; wealth per head
- Tourism statistics (both Australian and overseas visitors)
- 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 was gathered for all 79 Local Government Areas (LGAs) in Victoria. Missing data necessitated 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 required. This identifies those variables which are individually statistically significant and also maximises 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).

The Tables below outline the findings from the step-wise multivariate analysis, the results broken down between selected inputs (supply and demand related) and outputs (or effects) from EGM activity.

EGM access: Input supply results

TABLE 1. EGMs per 1000 adults

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

As can be seen in Table 1, 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, as a result 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. Those on lower incomes thus will spend more on gambling activities.

TABLE 2. EGMs per venue

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

The regression analysis in Table 2 further suggests 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 (see Table 3).

TABLE 3. EGMs per venue

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

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.

EGM access: Input demand-related results

TABLE 4. Net EGM spend per adult

Constant	EGMs per 1000 adults	EGMs per venue	Volunteers	Adjusted R-Squared	Durbin-Watson Statistic	F-Statistic
298.917 (**)	0.724(**)	0.150 (**)	-0.402 (**)	0.936	1.904	296.43

Table 4 shows that 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).

TABLE 5. Net expenditure per EGM machine

Constant	EGMs per 1000	EGMs per venue	Volunteers	Adjusted R-Squared	Durbin-Watson Statisti	F-Statistic

	adults				c	
112451.6 (**)	-0.151(*)	0.329(**)	-0.617 (**)	0.735	1.791	57.344

As can be seen in Table 5, again EGM spend per machine 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 too 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).

EGM access: Output effects

TABLE 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, as can be seen in Table 6, 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 (see Table 7). 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 the broader vibrancy of place and activity 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 additional to that provided by the community's gaming itself.

TABLE 8. 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 in Table 8, 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 can be seen as negatively affected by EGM gaming activity, while on the other it may simultaneously be the case that it also mitigates EGM-related activity.

(9) Problem gambling spending per person

Constant	Expenditure per EGM	Median Age	Adjusted R-Squared	Durbin-Watson Statistic	F-Statistic
-3.517	-0.354 (**)	0.332 (**)	0.35	1.374	17.458

The negative correlations with gaming expenditure highlighted in Table 9, 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).

TABLE 10. Cash related crime

Constant	Drug possession	Median Income	Unemployment	Overseas Visitors	Adjusted R Squared	Durbin-Watson Statistic	F-Statistic
-13837.5 (**)	0.286 (**)	0.404 (**)	0.245 (**)	0.429 (**)	0.842	2.265	81.995

The regression equation in Table 10 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.

Overall, 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. 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. 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 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.

The Importance of Creating Community Benefit: Evidence from Victoria

This raises a key issue regarding where the resources generated from gaming are channelled. Livingstone (2005) highlights some key issues for community benefit fund spending, which are worth restating here. The tax rate for EGM generated net revenue is effectively 33.33% for clubs, but 41.3% for hotels, the additional 8.3% tax rate for them reducing hotels “take” to 25%, the other 8.3% being channelled into the Community Support Funds which provide, on a submitted bid-matched funding-type basis, contributions to infrastructure, funding for remedial gambling related services and community development activities.

This seems to highlight the key need to more fully evaluate the activities of hotels and clubs in their use of EGM-related resources. This makes it even more important, however, to examine the roles and activities of clubs and hotels in their spending of the resultant resources, and the degree to which this can be seen as assisting in producing (or reducing) non-economic effects (such as social capital building) both within the clubs (and hotels) themselves, but also in the wider community through their spending decisions.

All EGM venues (clubs and until recently hotels also) must submit Community Benefit Statements of their contributions to community purposes (a situation that has recently changed for hotels which no longer have to submit such documents). The main point of this process is to ensure that club venues make a contribution to their communities an amount at least equivalent to the 8.3% of additional tax levied on the hotels.

Activities that can be defined as community purposes, however, include employment expenses of staff employed by venue operators in both gaming and non-gaming areas (in proportion to the revenue generated by gaming as a percentage of total revenue for the hotel or club), as well as gifts and sponsorships, subsidised meals, and (non-gaming related) fixed assets, and proportions of heating, power and other (non-gaming-related) costs, including signage and insurance. (Note- this is an issue which has recently undergone review). It is possible, therefore, that the social capital created in clubs has been 'undervalued', because of the way in which community benefit statements are designated, which do not include more difficult to measure activities which may create social capital.

Victorian EGM venues benefit statements claimed in 2005-2006 to have provided community benefits equivalent to $376m from EGM revenues (including the proportions taken by the government and machine operators) of around $2.5bn, approximately 15% of the total. AIPC (2006) highlight, however, that hotels generate twice as much per EGM as clubs do. Given that there are almost identical numbers of both hotel and club venues and average EGM numbers per venue, this therefore suggests that hotels have approximately twice the capacity to deliver community benefit resources from the same capital. The additional tax levied upon them, however, suggests that Hotels are not perceived to contribute very much in community and social capital in comparison with clubs.

Livingstone (2005) suggests, therefore, that the majority of community benefit designated in community benefit statements is accruing to the individual EGM venues and their clientele. Removing the EGMs would, however, cause major short-term upheaval in terms of the non-Community benefit statement claimed activities of these operations. This may be particularly the case given the high degree of cross-subsidisation taking place, particularly in relation to the activities of clubs, which may be seen to have higher social capital building capacity.

There is a need for gaming locations to be seen to be responsive to the communities in which they are located (Pitcher, 1999). Grant et al (2004), for example, 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, but also because of the 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, shifting the focus of analysis from the behaviour of individual agents to the pattern of relations between agents, social units and institutions. 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. Pitcher (1999) also highlights, however, 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.

Summary of Issues

The research findings of the international literature that EGM activity is concentrated in lower socio-economic areas and expenditure is concentrated in those who have lower incomes have been borne out in our study.

Overall, there are clear potential links here between gaming and the creation and destruction of community social capital, which need to be weighed against one another. Of key importance is the under-reported and consequently, undervalued role of clubs, in creating, sustaining, and building community social capital through their use of gaming-related resources and the deployment of club resources accrued through gaming activities.

An evaluation framework is required to be developed that:

- Takes into account the full range of inter-related social and economic effects from gaming,
- Considers the direct contribution of gambling revenue on community development activity and employment,
- Considers the ways in which the mechanisms through which revenue is used also encourage social and network capital development

The EGM link is tied in with the broader vibrancy of place and activity variables (e.g. pubs, clubs, shopping, entertainment, etc.). Tourism activities appear to provide additional revenue instead of simply substituting one class of expenditure with another.

Larger venues can be seen as a potential mitigation of community resource outflows, as, these venues generate higher resources per EGM, and subsequently offer the possibility of higher potential resources for community benefit.

Our study has highlighted that social capital creation and network development are critical aspects of the gambling debate. There is a need to supplement the analysis of the behaviour of individual agents who participate in gaming activities with an understanding of the pattern of relations between agents, social units and institutions in the electronic gaming domain. Importantly, the findings of our

study indicate that volunteering may create community resilience to problem gambling.

Finally, community benefits of clubs may be undervalued as the existing mechanisms to capture community benefit do not acknowledge the full range of social capital creation and community resource generation by clubs.

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