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30th January 2007

Mr R Chappell
Director
Independent Gambling Authority
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Dear Robert

REVIEW GAMING MACHINE LEGISLATION

I refer to previous correspondence concerning the above, and in accordance with my advice of the 9th November 2006, enclose the Association's submission prepared by the South Australian Centre for Economic Studies (SACES) relating to "Impact of the Reduction in Gaming Machines in the Provincial Cities".

The research work undertaken by the SACES, clearly shows that:

- the policy adopted by Parliament to reduce Electronic Gaming Machines has not worked and has had little or no impact on the disproportionate concentration of machines in the Provincial Cities;
- based on the model adopted by the Productivity Commission, it is estimated that 3.8 per cent of the adult population in the Provincial Cities are considered to be problem gamblers as compared to a State average of 2.8 per cent;
- Net Gaming Revenue (NGR) for the Provincial Cities as a Group showed that despite a decline in machine numbers of 7.7 per cent (175 machines) revenue was up to 4.9 per cent;
- reducing machine numbers is not particularly effective in reducing expenditure nor in addressing the behaviour of problem gamblers, as a reduction in machine tends to lead to an increase in usage of remaining machines (venue owners have reported similar views).

The report recommends that to reinforce consumer responsibility, to improve consumer protection, and to address the negative impacts of problem gambling, smart card technology should be introduced in South Australia. This view is strongly supported by the Association and is commended to the Independent Gambling Authority as a major recommendation to Government.

The Independent Gambling Authority has acknowledged that the current policy adopted by Parliament is not working and that losses on Electronic Gaming Machines continue to rise, particularly in the Provincial Cities. Accordingly, the Association submits that some significant change of policy is required and we believe that the smart card technology which is available, provides the mechanism for the change.

Should you and the Independent Gambling Authority wish to discuss the contents of our submission, the Association Chairman, Mayor Joy Baluch AM, Deputy Chairman Mayor Jim Pollock and I would be pleased to meet with all concerned at a mutually convenient time and location.

I look forward to receiving your further advice in relation to this matter.

With kind regards.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ian McSporrán', with a stylized flourish at the end.

IAN McSPORRAN
EXECUTIVE OFFICER



SOUTH AUSTRALIAN
CENTRE FOR ECONOMIC STUDIES



ADELAIDE & FLINDERS UNIVERSITIES

Impact of the Reduction in Gaming Machines in the Provincial Cities

Report commissioned by
The Provincial Cities Association of SA

Report prepared by
The SA Centre for Economic Studies

December 2006

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Executive Summary

Under the Gaming Machine (Miscellaneous) Amendment Bill 2004, a total of 3,000 gaming machines are to be removed from licensed premises in South Australia. This measure is designed to address problem gambling, because “70 per cent of all problem gambling relates to gaming machines”. The most persuasive evidence (fact) in support of this, is that Western Australia, where gaming machines are only allowed in a single site casino, has a prevalence rate of problem gambling of 0.7 per cent.

Machine Density and Removal

The concentration of EGMs in the Provincial Cities has been well documented. The situation in 2004-05 was that:

- the Provincial Cities accounted for 9.8 per cent of the State’s adult population and 15.1 per cent (or 2,111) electronic gaming machines.

The situation has worsened in 2005-06 with:

- the Provincial Cities accounting for 9.7 per cent of the State’s adult population and 15.6 per cent of electronic gaming machines.

It is clear that the policy adopted by Parliament has had little or not impact on the disproportionate concentration of machines in the Provincial Cities.

Under the current regime of trading rounds to complete the removal of 3,000 machines (only 2,202 machines have been removed to date) it will take a minimum of 23 years to remove a further 798 machines.

Problem Gamblers, Net Gaming Revenue, Impact of Reduction

The Centre’s most recent estimate of problem gamblers in the Provincial Cities is 4,610 persons or 3.8 per cent of the adult population and that for the State is 2.8 per cent.

Net Gaming Revenue (NGR = losses) per adult is disproportionately high¹ relative to Adelaide (129 per cent) yet average after tax incomes are only 85 per cent of the metropolitan average.

The data indicates that there has been no switching in venues as a result of the reduction in machine numbers in the for profit sectors. Aggregate growth in revenue was strongest for mid-sized venues (21-35 machines: 11 per cent), (15-20 machines: 19 per cent).

There is no apparent correlation between the percentage change in EGM numbers and change in net gaming revenue. Nine of the Provincial Cities lost machines and 7 experienced an increase in NGR. For the Provincial Cities as a group, they lost 175 machines, a decline of 7.7 per cent while revenue was up by 4.9 per cent.

¹ Only Loxton-Waikerie is below the Adelaide average.

Measured against the trend in NGR (modelled prior to the removal of machines), machine reductions in the order of 10.4 per cent for South Australia (Provincial Cities 11.5 per cent) were required to achieve a 5.3 per cent reduction in NGR (Provincial Cities: 3 per cent) as the utilisation rate of remaining machines no doubt increased.

Reducing machine numbers is not particularly effective in reducing expenditure nor in addressing the behaviour of problem gamblers. Venue owners report similar views.

To reinforce consumer responsibility, to improve consumer protection and to address the negative impacts of problem gambling it is recommended that smart card technology be introduced in South Australia.

The intent of policy should be to assist all those who choose to gamble make rational choices/decisions regarding both the time they spend gambling and the amount of money they gamble (i.e., are prepared to lose). This is not a decision for the industry; this is not a decision for the venue; this is not a decision for government. The decision for government — and their action — is to provide the mechanism for the individual to make that rational decision prior to commencement of gambling activity. Smart card technology in various forms provides that mechanism.

Current policy responses — not only in South Australia but throughout Australia — fail to do this. This is a clear example of government failure to provide appropriate consumer protections to protect not only problem gamblers but their families and in particular young children and the wider community.

1. Introduction

The Terms of Reference for the Independent Gambling Authority Inquiry into Management of Gaming Machine Numbers set out that the

“Authority must identify ... options for the management of gaming machine numbers ... with particular attention to strategies to minimise gambling related harm” (ToR 1.1).

Further, the Authority was advised it must give consideration to:

“measures which allow for the management of gaming machine turnover on both regional and state wide bases, through the allocation of gaming machines”. (ToR 1.3b)

And further, the Authority “must consider what would be an appropriate number of gaming machines for South Australia at particular future points in time, noting (among other things):

a) distribution geographically ...”. (ToR 2.4).

The Provincial Cities Association prepared and presented a submission to the Inquiry and subsequently prepared a supplementary submission to assist in the deliberations of the Inquiry.

Following the Inquiry the IGA reported to Government and in the Executive Summary to the final report it noted the following:

“that the detailed terms of reference stressed a consideration of all reasonably practical options ... with particular attention to strategies to minimise gambling related harm”. (p. 1)

“the Authority has concluded that there is a causal relationship between accessibility of gaming machines (and 70 per cent of all problem gambling relates to gaming machines) and problem gambling and other consequential harm in the community”. (p. 2)

that “there is a special need to address the disproportionate number of gaming machines and venues which are to be found in our provincial cities. The submission of the Provincial Cities Association has persuaded the Authority of a very real need in this area”. (p. 3)

The Inquiry recommended that, to address this concern and the impact of gaming machine gaming, 3,000 gaming machines were to be removed and that there be a cap on the number of machines fixed initially at 12,000.

Significantly, it also noted that “if the prevalence of problem gambling does not reduce within 18 months then further reductions will be necessary” (Executive Summary, p. 3).

It is important to note here that the Authority equates a reduction in machine numbers as a significant public policy intervention designed to impact (i.e., reduce) the prevalence of problem gambling.

The AHA and others disagreed with the assessment of the IGA and suggested that capping of machine numbers had had no apparent positive impact on problem gambling under the previous policy of freezing machine numbers. However, under this policy the number of machines increased substantially due to the manner in which the cap on machine numbers was implemented.

SA Treasury also provided correspondence to the IGA (Assistant Under Treasurer, 23 May 2003) based on their analysis to suggest “any differences in gambling expenditure can not be attributed with any confidence to any causal influence of machine numbers in SA — let alone problem gambling” (p. 3). However, they did note that the “market is already at or beyond saturation point” (p. 3).

Extensive research on the trial of regional caps for the Victorian Government concluded that the caps policy the Bracks’ Government implemented was so marginal over an extended time period that it had no effect on net gaming revenue and no observable impact on problem gamblers. That report concluded:

“we find no evidence that the regional cap policy had any positive influence on problem gamblers attending counselling, on problem gamblers counselling rates or other forms of help seeking behaviour”.²

In an evaluation of the 2004 amendments to reduce EGM numbers in South Australia commissioned by the IGA³ it was reported that there was little evidence of any decline in revenue for venues that lost machines.

“On the whole, for profit venues did not experience a decrease in their net EGM revenue. Net revenue per EGM in these venues in fact was found to be higher once the machines were removed (i.e., patrons appeared to spend the same amount on 32 machines as they did on 40)” (p. 14).

Problem gamblers who attended focus groups were aware of the recent changes to machine numbers, “but did not believe that removing a relatively small proportion of machines had influenced their behaviour, or had any meaningful impact on problem gambling” (p. 15).

And in the survey of regular patrons it was reported

“very few gambled (sic-gamblers) believed that the removal of machines had influenced the amount of time and money spent on gambling on EGMs, or their ability to control their gambling” (emphasis added); and that

“eighty per cent of respondents indicated that the legislation had not reduced problem gambling” (p. 15).

These last two comments from gamblers are important in that reducing time and money spent gambling is surely the intent of any strategies to minimise gambling related harm.

In fact the National Definition of problem gambling, accepted by all States and Territories is:

“Problem gambling is characterised by difficulties in limiting money and/or time spent on gambling which leads to adverse consequences for the gambler, others, or for the community”.

Independent research on policies designed to cap machine numbers, an evaluation of the current reduction strategy (which has all but stalled), comments from venue owners and problem gamblers themselves all point to the ineffectiveness of capping machine numbers as a way to address problem gambling. Notwithstanding, there may be other benefits such as reducing the “tax take” from regions if the rate of growth can be slowed or machines transferred to clubs that face a more favourable tax impost and reducing the exposure of young people to gaming machines.

² “Study of the Impact of Caps on Electronic Gaming Machines”, SA Centre for Economic Studies, May 2005.

³ “Evaluation of 2004 Legislative Amendments to Reduce EGMs”, Research Report, July 2006.

These benefits aside, the intent of the policy was to minimise gambling related harm and to reduce the prevalence of problem gambling.

In relation to the Provincial cities, there was a stated need to “address the disproportionate number of gaming machines and venues” in the cities.

The Centre for Economic Studies was commissioned by the Provincial Cities to examine the impact of the scheduled reduction in machine numbers, to assess what had been the impact on revenue, venues and problem gamblers since machine removal commenced and what conclusions could be drawn from the publicly available data. In undertaking the study we also spoke to venue operators, community and for profit hotels and clubs to gauge their views on the effectiveness of the machine reduction policy.

2. Background

Gaming machines were illegal throughout Australia until 1956, when they were legalised in NSW within registered clubs. The ACT followed suit in 1976, but a ban remained in place in the other States until the 1990s. Nevertheless, it is believed that for almost a century illegal machines existed across the nation, including in South Australia (AIGR, 181).

Concerns about organised crime and the social impact of gaming held back the Australia-wide legalisation of gaming machines until the beginning of the 1990s. By that time, State governments were becoming more receptive to economic arguments for legalisation – particularly the benefits for the hotel industry and non-profit associations. The promise of gambling tax revenue was appealing and the computerisation of gaming machines had increased their reliability and reduced the possibility of crime (i.e., criminal activity directly related to the actual machine).

In 1991 Victoria and Queensland legalised gaming machines in hotels and clubs. The next year South Australia did likewise with the enactment of the *Gaming Machines Act 1992*. The Northern Territory and Tasmania followed in later years, leaving Western Australia as the only State in which gaming machines are still banned (apart from the Burswood casino).

Each State's statutory regime has rules regarding the operation and quantity of gaming machines. There are statutory caps on the number of machines that can be operated by each venue. In South Australia's case this is a maximum of 40 per hotel and club in South Australia.

In some jurisdictions, there is also a State-wide 'cap' on the overall number of machines. No such cap was originally incorporated into the South Australian legislation. However, the State Government imposed a freeze on the number and location of gaming machines in South Australia with effect from 7 December 2000.

In a further control measure, under the *Gaming Machines (Miscellaneous) Amendment Bill 2004*, a total of 3,000 gaming machines are to be removed from South Australia through an initial removal of about 2,200 gaming machines on 1st July 2005, and thereafter by the gradual removal of machines through successive trading rounds.

2.1 Gaming in South Australia

The first South Australian EGMs were installed in hotels and clubs in July 1994. The hotel industry originally had the lion's share of EGMs, and hotels have added machines more quickly than clubs. Between 1995 and 2004, the number of hotel venues with EGMs doubled, and the number of hotel machines also roughly doubled (at an average growth rate of 12.2 per cent per annum). Over the same period, the number of club venues rose by 60 per cent and their number of machines increased by 55 per cent (average growth of 6.8 per cent per annum).

In the lead-up to Parliamentary debates on the introduction of gaming machines, the South Australian government prepared a paper discussing options for the operation of EGMs. This paper, released in June 1991, contained a detailed forecast of the annual revenue that could be expected ('revenue' in this context meant total EGM net gambling revenue). It stated:

“Although experience in New South Wales and the ACT suggests that the potential exists for up to \$244 million in [annual] revenue to be raised [in SA] from the introduction of gaming machines in licensed premises, this is very much an upper limit.”

The paper outlined several reasons why this \$244 million “upper limit” was unlikely to be reached in South Australia. There was an income differential between New South Wales and South Australia, and New South Wales also had the benefit of higher tourism. The paper also suggested that, not having the slot-machine club culture of New South Wales, the South Australian community had “developed different preferences for entertainment”. It concluded: “In a mature South Australian gaming machine market therefore the available revenues may be of the order of \$168 million.”

The actual figures from the introduction of EGMs onwards are presented in Table 2.1. They have been deflated to 1990-91 dollars to make them comparable with the option paper figures.

Table 2.1
Electronic Gaming Machines – Expenditure – 1994-95 to 2003-04

	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Expenditure (1990-91 \$m)	171	283	319	345	383	410	433	470	503	531
Venues	307	417	484	513	539	564	587	592	604	593
Electronic gaming machines	7,374	9,262	10,451	10,898	11,944	12,738	10,096	14,647	14,841	14,799

Source: OESR, Queensland Treasury, *Australian Gambling Statistics 2005*. Calculations by SACES.

In the first year, before the market could be considered “mature”, expenditure exceeded the \$168 million forecast which the options paper considered most likely. By the second year, expenditure exceeded the paper’s \$244 million “upper limit”. By 2003-04 actual expenditure was more than double that “upper limit”.

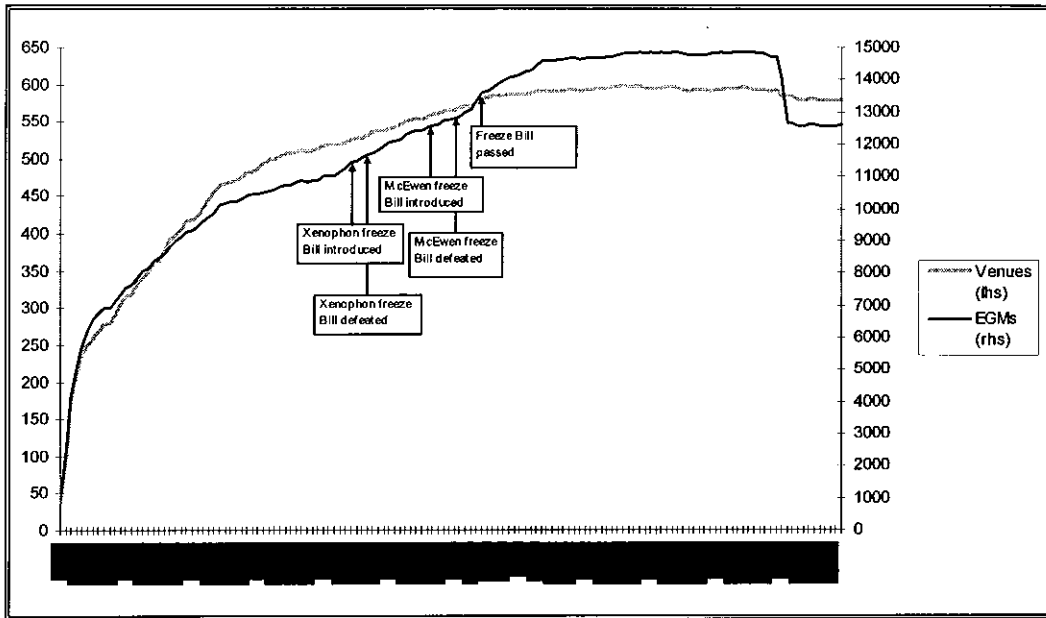
Figure 2.1 illustrate diagrammatically the dramatic growth in machine numbers through the early part of the 1990s, their continued growth following the passing of the “freeze bill” and the recent reduction in machine numbers. The growth path in the number of venues is also shown.

Figure 2.2 shows the rise of EGM expenditure has also been dramatic: South Australians now spend more than twice the amount on the ‘pokies’ than on every other type of gambling combined. EGMs account for 68.3 per cent of total gambling expenditure. The other major sectors each account for around 10 per cent of total gambling expenditure. This shift in expenditure by gambling type provides an important insight into the relatively recent changes in gambling behaviour and participation.

2.2 Problem Gambling

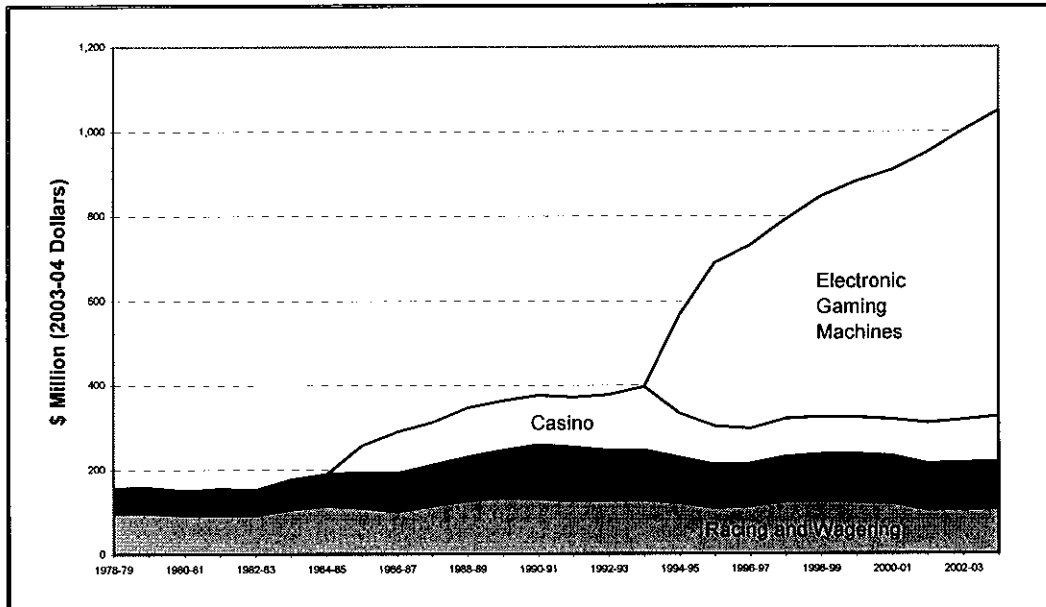
About 80 per cent of adults in Australia have gambled at some stage in their lives. The overwhelming majority gamble responsibly and experience no problems as a result of this form of entertainment. Nevertheless, a significant number do experience problems with, by one estimate, around 1 per cent meeting the criteria for pathological gambling and 2.3 per cent experiencing significant gambling problems (Blaszczynski 2002). This is generally higher than the USA and Canada where access to all forms of gambling, particularly electronic gaming machines (EGMs) is more restricted (Australian Institute of Gambling Research, 1997).

Figure 2.1
Number of Venues and Electronic Gaming Machines
South Australia – July 1994 to June 2006



Source: Office of the Liquor and Gambling Commissioner.

Figure 2.2
Gambling Industries – South Australia – Real Expenditure
1978-79 to 2003-04



Source: OESR, Queensland Treasury, *Australian Gambling Statistics 2005*. Calculations by SACES.

Electronic Gaming Machines have been identified by many community groups and state governments as being of particular concern, because they represent such a large share of all gambling and because they are perceived to be linked to the development of a range of social problems. The Productivity Commission noted a more robust relationship between problem gambling and numbers of EGMs than for other indicators of gambling availability, and this remains persuasive notwithstanding later criticisms.⁴

While a small proportion of players, the contribution of problem gamblers to industry revenue is significant; the Productivity Commission (1999) estimated that 42.3 per cent of all money spent on EGMs in Australia is by problem gamblers, of which the majority (and 33.7 per cent of the whole) is spent by those with severe problems. The costs to the problem gambler of time spent gambling can be equally disruptive to their families, friends and career. Jackson, *et al* (2000) report that problem gamblers that normally use EGMs typically play for spells of around 3 hours, an average of 8 times per month.⁵

The effects of problem gambling are compounded by their disproportionate impact on lower socio-economic groups, with lower income households spending disproportionately greater shares of income on gambling. This phenomenon is not unique to Australia, with Korn (2000), for example, citing Canadian data that households with income of less than \$20,000 per annum spent 2.2 per cent of income on gambling, while households with incomes of \$80,000 or more spent just 0.5 per cent of income on gambling.

What is often quoted from the Productivity Commission (1999) is their estimate of the extent of problem gambling for all forms of gambling:

- that nationally, 2.1 per cent of the adult population is estimated to have a significant problem with gambling;
- 1 per cent have severe gambling problems; while
- 1.15 per cent have moderate gambling problems.

Equally significantly, but far less spoken of are the following estimates provided by the Productivity Commission:

- 4.67 per cent of all gaming machine gamblers are problem gamblers;
- those States with high concentrations of gaming machines and other forms of gambling have high problem gambling prevalence rates (New South Wales 2.55 per cent, Victoria 2.14 per cent); and
- those States with no gaming machines or limited gaming activity had lower problem gambling prevalence rates (Western Australia 0.7 per cent, Tasmania 0.44 per cent).

⁴ Mizerski et al (2001) have disputed the special relationship between problem gambling and EGMs, using the Productivity Commission (1999) survey data to argue that the distribution of machine gaming among consumers is not dissimilar to the pattern associated with most consumer goods and other forms of gambling. There are significant methodological problems to be found in the paper, and hence, the conclusions contained in the paper should be discounted.

⁵ Estimates vary. Roy Morgan (2001) found that the average time spent playing EGMs by those identified as 'at risk' was 195 minutes per week compared to 27 minutes among all players.

3. Gaming in the Provincial Cities

3.1 Data

The long terms trends in gaming accessibility and behaviour are outlined in this section. As discussed in Section 2, there has been significant increases in both the accessibility of electronic gaming machines and in net gaming revenue for the State as a whole. This pattern has also held true for the Provincial Cities. It has been noted by a number of studies that both gaming machines and gaming machine venues (see Table 3.1) are more prevalent within the Provincial Cities relative to the State, with expenditure following similar trends.

Table 3.1
Venues and Machine Numbers, 1994-95 to 2005-06

	1994-95	1996-97	1998-99	2000-01	2002-03	2004-05	2005-06
Venues							
Adelaide	196	236	299	326	335	321	315
Berri Barmera	4	7	7	7	7	7	7
Loxton Waikerie	5	7	7	7	7	6	6
Mt Gambier	9	10	11	12	12	12	12
Murray Bridge	4	5	6	6	6	6	6
Port Augusta	6	9	11	13	12	12	12
Port Lincoln	4	8	8	7	7	7	7
Port Pirie	4	8	8	9	9	9	9
Renmark Paringa	2	6	7	7	7	7	6
Victor Harbor	3	3	3	3	4	4	4
Whyalla	6	7	7	7	7	8	8
Rural SA	66	139	165	191	189	184	184
Electronic Gaming Machines							
Adelaide	5,280	6,052	7,947	9,224	9,869	9,292	8,151
Berri Barmera	100	139	162	184	184	184	176
Loxton Waikerie	128	140	142	142	148	144	144
Mt Gambier	241	307	351	424	424	380	357
Murray Bridge	112	152	160	160	160	160	138
Port Augusta	127	177	260	315	305	282	268
Port Lincoln	84	187	209	225	225	211	183
Port Pirie	132	223	228	260	260	236	220
Renmark Paringa	64	106	118	148	160	160	144
Victor Harbor	108	108	108	108	128	112	106
Whyalla	167	179	183	216	216	242	220
Rural SA	835	1,684	2,076	2,690	2,706	2,603	2,443

Source: OLG.

The extent of concentration of electronic gaming machines in the Provincial Cities is clear from Table 3.2. By 2004-05 there were 2,111 electronic gaming machines in the Provincial Cities, or 15.1 per cent of the State's total although the cities only accounted for 9.8 per cent of the State's adult population. With the recent reductions in EGM numbers this relative disproportion has actually increased, with the Cities containing 15.6 per cent of the State's EGMs but only 9.7 per cent of the adult population. This reflects the relatively large share of not-for-profit venues in the Provincial Cities which did not lose machines as part of the reduction in entitlements.

These disproportionate shares of EGMs have resulted in extremely high machine densities (measured by the number of machines per 1,000 adults). Even after the recent reductions three of the cities have machine densities above 20 per thousand adults, and a further four have densities above 15/1,000 adults. This suggests that opportunities to use an EGM are still very accessible.

It is interesting to note that these concentrations were highlighted by the IGA in their report as being of concern.

“... there is a special need to address the disproportionate number of gaming machines and venues which are to be found in our provincial cities. The submission of the Provincial Cities Association has persuaded the Authority of a very real need in this area”. (IGA, 2003, p.3)

Table 3.2 however makes it clear that the policy adopted by Parliament has had little or no impact on the disproportionate concentration of machines in the cities.

Table 3.2
Electronic Gaming Machine Densities
Machines per 1,000 adults

	1994-95	1996-97	1998-99	2000-01	2002-03	2004-05	2005-06
Adelaide	6.2	7.8	9.1	10.4	11.0	10.2	8.9
Berri Barmera	11.8	16.6	19.2	21.7	21.8	21.8	20.8
Loxton Waikerie	14.2	15.4	15.4	15.5	16.1	15.6	15.6
Mt Gambier	14.4	18.4	20.7	24.5	24.4	21.6	20.3
Murray Bridge	9.1	12.5	12.8	12.6	12.3	11.9	10.3
Port Augusta	12.0	17.3	26.1	31.2	30.0	27.5	26.2
Port Lincoln	9.2	20.2	22.0	22.2	21.5	19.6	17.0
Port Pirie	9.8	16.7	17.0	19.8	19.9	17.9	16.7
Renmark Paringa	9.3	15.0	16.4	20.3	22.0	21.9	19.8
Victor Harbor	15.8	14.5	13.1	11.8	13.1	10.8	10.2
Whyalla	9.2	10.2	10.6	13.3	13.6	15.4	14.0
Rural SA	5.5	11.7	13.3	16.9	17.0	16.2	15.1

Source: OLGC.

Table 3.3 outlines the trends in net gaming revenue for the Provincial Cities compared to the rest of the State. The very rapid increases that occurred in expenditure in many of the Cities is clear with net gaming revenue quadrupling over twelve years in Berri Barmera, Murray Bridge, Port Augusta, Port Lincoln and Port Pirie. It is also clear that there have been significant variation in the experience of the Cities with, for example, Loxton Waikerie only experiencing a doubling of expenditure over the same period.

The extent to which net gaming revenue in the Provincial Cities is disproportionately high is clearer when expenditure per adult is examined. The only Provincial City with lower per adult expenditure than Adelaide is Loxton Waikerie, and in some cases expenditure in the Provincial Cities is significantly higher (for example in Berri Barmera expenditure per adult is 150 per cent of Adelaide's). Nor is it the case that these differences simply reflect relative incomes. The average after tax income per adult for the seven Provincial Cities was 85 per cent of metropolitan Adelaide, but average NGR per adult was 129 per cent.

Table 3.3
Net Gaming Revenue, \$ million (nominal)

	1994-95	1996-97	1998-99	2000-01	2002-03	2004-05	2005-06
Adelaide	145.24	245.92	343.63	428.43	524.34	584.80	583.61
Berri Barmera	2.11	4.74	5.33	6.21	7.54	8.04	8.07
Loxton Waikerie	2.07	3.14	3.32	3.63	4.03	4.26	4.42
Mt Gambier ^a	6.02	9.76	11.29	13.02	15.25	17.62	17.16
Murray Bridge	2.22	4.82	5.70	6.85	7.92	9.56	9.33
Port Augusta	2.31	4.46	5.20	6.15	8.40	9.42	9.71
Port Lincoln	1.91	3.74	5.26	6.01	8.25	9.15	9.31
Port Pirie	2.62	5.25	5.70	6.61	7.77	8.77	9.19
Renmark Paringa	1.69	3.29	3.48	4.04	5.27	5.48	5.77
Victor Harbor ^a	3.83	5.69	5.97	6.72	11.44	9.89	12.53
Whyalla	4.31	7.48	8.05	9.65	11.40	13.35	14.74
Rural SA	12.64	32.53	39.51	46.17	54.87	66.82	64.48

Note: ^a In order to protect the confidentiality of venues regarding their gaming revenue, for the purposes of this data analysis Mt Gambier has been combined with the District Council of Grant, and Victor Harbor with the District Councils of Yankalilla and Kangaroo Island.

Source: OLGC.

Table 3.4
Net Gaming Revenue per Adult (\$)

	1994-95	1996-97	1998-99	2000-01	2002-03	2004-05	2005-06
Adelaide	171.7	318.0	394.0	483.7	582.0	638.9	637.6
Berri Barmera	248.8	565.7	633.4	733.5	894.5	951.4	955.7
Loxton Waikerie	229.7	346.2	360.8	395.7	438.1	463.1	480.4
Mt Gambier ^a	271.0	435.2	492.5	564.8	652.9	740.9	721.7
Murray Bridge	180.1	396.5	455.5	541.4	609.9	712.1	695.0
Port Augusta	217.7	435.4	522.9	609.6	824.6	919.9	948.2
Port Lincoln	209.6	404.6	555.2	593.1	787.9	849.1	863.8
Port Pirie	193.4	394.1	424.6	503.8	594.3	666.9	698.5
Renmark Paringa	245.4	464.8	481.6	553.7	724.9	751.3	792.1
Victor Harbor ^a	305.0	425.1	409.3	438.2	705.6	579.5	733.9
Whyalla	238.7	425.9	468.2	595.1	717.0	847.9	936.2
Rural SA	89.5	245.1	273.6	314.5	374.8	452.2	434.1

Note: ^a In order to protect the confidentiality of venues regarding their gaming revenue, for the purposes of this data analysis Mt Gambier has been combined with the District Council of Grant, and Victor Harbor with the District Councils of Yankalilla and Kangaroo Island.

Source: OLGC.

The high levels of net gaming revenues in the Provincial Cities also mean that they have been large contributors to State Government revenue, although this is slightly offset in many cases by the higher than average numbers of not-for-profit venues, which pay a lower tax rate, in the Cities. For example the State Government received \$2.35 million in taxation revenue from venues in Berri Barmera in 2004-05, for the same period total general rates revenues for the city were \$5.1 million⁶. This represents a substantial outflow from the Cities, and it is not clear that they receive disproportionate expenditure from the State government.

⁶ Berri Barmera Council (2005), 'Annual Report 2004-05', p. 52.

Table 3.5
Taxation Receipts from Net Gaming Revenue, \$ million

	1994-95	1996-97	1998-99	2000-01	2002-03	2004-05	2005-06
Adelaide	48.67	91.71	153.02	154.96	201.37	245.36	242.04
Berri Barmera	0.69	1.72	1.90	1.75	2.15	2.35	2.33
Loxton Waikerie	0.67	1.11	1.12	0.92	0.99	1.05	1.10
Mt Gambier ^a	2.01	3.58	4.64	4.16	5.01	6.06	5.82
Murray Bridge	0.75	1.79	2.37	2.42	2.87	3.76	3.57
Port Augusta	0.77	1.61	1.97	1.90	2.64	2.98	3.07
Port Lincoln	0.64	1.34	2.16	2.04	2.95	3.43	3.42
Port Pirie	0.88	1.89	2.33	2.09	2.48	2.86	2.95
Renmark Paringa	0.53	1.19	1.25	1.10	1.48	1.54	1.64
Victor Harbor ^a	1.27	2.06	2.43	2.24	3.68	3.40	4.02
Whyalla	1.45	2.78	3.54	3.38	4.15	5.24	5.70
Rural SA	4.20	11.45	14.55	12.96	14.72	17.58	16.96

Note: ^a In order to protect the confidentiality of venues regarding their gaming revenue, for the purposes of this data analysis Mt Gambier has been combined with the District Council of Grant, and Victor Harbor with the District Councils of Yankalilla and Kangaroo Island.

Source: OLG.C.

3.2 Problem gambling in the Provincial Cities

In order to better understand regional variations in problem gambling associated with electronic gaming machines, in a 2001 study for the Provincial Cities Association the Centre developed a model that enabled the number of problem gamblers to be estimated using administrative data on EGM expenditure.⁷ The alternative method of using a survey approach to estimate problem gamblers at a regional level was considered too resource intensive.

The model developed by the Centre used Productivity Commission data on average national net EGM expenditure by problem and non-problem gamblers to calculate the average proportion of after tax income spent by these two types of gambler. By making the assumption that these averages were constant between regions, average net gaming revenue estimates could be calculated for both types of gambler. This data was then combined with information on overall participation in gaming to estimate the number of problem gamblers in each region as implied by each of the expenditure levels. The key result was that whilst for the State as a whole these calculations implied a slightly smaller number of problem gamblers than did the Productivity Commission's survey, there were significant regional variations.

Since the Centre's 2001 study which estimated problem gamblers in respect of 1998-99, expenditure on gaming machines has grown much more strongly relative to disposable incomes. With available data suggesting that participation in EGM gambling has not changed significantly since this time, this suggests there has been some change in the pattern of EGM spending, with either those gambling being willing to spend a greater proportion of their income on gaming machines, or there being an increase in the proportion of individuals experiencing problem gambling, or some combination of the two. For this reason, as part of the Centre's recent study on the economic impact of gambling in South Australia, it was decided to re-estimate the number of problem gamblers for South Australia following the methodology that was developed in the 2001 study.

⁷ SACES (2001).

The methodology and assumptions adopted are explained in more detail in the Centre's report.⁸ One significant change to the methodology was made in relation to the share of disposable incomes spent on EGMs. In recognition that there has been an increase in the proportion of disposable income available to spend on EGM gambling since 1998-99, it was assumed that all EGM gamblers (i.e., problem gamblers and non-problem gamblers) have increased their net gaming expenditure by a proportion equal to the overall increase in consumption as a share of household income in South Australia since the Productivity Commission's survey.⁹

Table 3.6 shows the results obtained using the Centre's model. It is estimated that there were approximately 23,877 problem gamblers in South Australia in 1998-99, which is equivalent to 2.1 per cent of the adult population. The latest estimates suggest there has been a significant increase in problem gambling. It is estimated that there were almost 33,000 problem gamblers in South Australia in 2002-03, which is equivalent to 2.8 per cent of the adult population.

The results also suggest there has been a significant increase in problem gambling in the Provincial Cities. The number of problem gamblers is estimated to have increased from approximately 3,825 persons in 1998-99 to almost 4,610 persons in 2002-03.

Table 3.6
Prevalence of Electronic Gaming Machine Related Problem Gambling
South Australia: 1998-99 and 2002-03

	Adult Pop.	After tax income	Gamers	Non-Problem Gamers	Problem Gamers	
	(No.)	(\$)	(No.)	(No.)	(No.)	(% of adults)
1998-99						
Adelaide Metro	869,498	14,781	326,062	308,286	17,858	2.06
Provincial Cities	110,025	13,493	48,589	44,764	3,825	3.23
Rural SA	154,496	12,140	49,140	46,945	2,195	1.48
Total SA	1,136,019	14,292	423,791	399,995	23,877	2.10
2002-03						
Adelaide Metro	901,662	16,620	338,123	312,322	25,802	2.86
Provincial Cities	120,743	14,092	49,505	44,895	4,610	3.82
Rural SA	155,515	16,252	51,631	49,162	2,499	1.61
Total SA	1,177,921	16,407	438,495	405,531	32,964	2.80

Note: In the original 2001 study, Victor Harbor was included in 'Rural SA', it has now been shifted to the Provincial Cities. There have also been some slight adjustments to the model making the results fractionally different from the original.

Source: Productivity Commission, Office of Economic and Statistical Research, Queensland Treasury, and ATO, calculations by the researchers.

Of greater concern from the Provincial Cities perspective is that problem gambling appears to be relatively higher in the Provincial Cities compared to the Adelaide metropolitan area and other rural areas of the State. The Provincial Cities were estimated to have a problem gambling prevalence rate of 3.8 per cent in 2002-03 compared to 2.8 per cent for the Adelaide metropolitan area and 1.6 per cent for other rural areas in the State.

⁸ SACES (2006), not yet published.

⁹ This gives average expenditure shares for EGM gamblers of 4.9 per cent of after tax income for non-problem gamblers and 73.1 per cent for problem gamblers.

The results are naturally only indicative given they are derived indirectly from administrative data using a model that employs several assumptions. Nevertheless, the significant increase in expenditure since 1998-99 combined with no apparent change in participation in EGM gambling suggests that something significant has happened in terms of expenditure patterns and/or the extent of problem gambling.

3.3 Venues' Views

In order to obtain the perspective of venues in relation to the reduction in gaming machines and gain insight into potential gambling trends and patterns over the past year, SACES visited and interviewed five venues (community hotels and clubs) in one of the Provincial City regions.

Continued rise in expenditure

Expenditure on gaming machines has continued to grow strongly over the past 5 years but the available evidence indicates that participation in EGM gambling has not changed significantly over this time. This suggests that there has been significant change in gambling patterns, with either non-problem gamblers spending an increased proportion of their incomes on gaming machines, there being an increase in problem gambling; or a combination of the two. Interviewees were asked their thoughts on what may explain the apparent increase in per capita expenditure.

Several interviewees pointed to the general strength of economic conditions over recent years as being an important factor. Spending has generally been strong throughout the economy as demonstrated by solid growth in retail trade and by increased spending on luxury items (e.g., plasma televisions, new motor vehicles), while wealth has increased strongly with large rises in house prices. It was therefore considered natural for there to be a solid increase in spending on gaming machines given that it is an important form of entertainment for people.

In terms of the impact of strong economic conditions on EGM expenditure, it was observed that the main industries that have driven the strong performance of the regional economy in the past had experienced a significant downturn recently. For one respondent, it was surprising that this development had not led to a noticeable increase in problem gambling. On the other hand, another venue suggested that if the decline in industry performance continued in the coming years, it would be surprising if there was not some reduction or levelling off in EGM expenditure. If EGM expenditure continued to rise despite a continued downturn, then this would provide further evidence that there has been some increase in problem gambling.

Benefits of Gaming Machines

Community hotels and clubs provide a range of benefits to the local community that would be significantly diminished, it was claimed by those interviewed, with the removal or large reduction in the number of gaming machines. Community venues typically provide significant grants and sponsorship to sporting and community organisations. Examples include the provision of new or upgraded infrastructure and equipment for sporting clubs (e.g., new or refurbished netball courts, tennis courts, new mowing equipment for golf club). One venue provides a significant annual contribution to the local community hospital and

additional support to community organisations such as Rotary. Other benefits include the provision of cheaper drinks and meals for customers, and cheaper services for members.

For one large venue, the funding provided by gaming machines and the application of improved management practices had enabled it to take over other venues (e.g., golf clubs), significantly improving their facilities, turning them from loss to profit making organisations.

Interestingly, it was noted by some interviewees that there would be some adverse social consequences for local regional communities – which are not typically taken into account when considering the socio-economic impact of gambling – if there was a severe reduction or complete removal of gaming machines. It was observed that many small towns have their own hotel or club which is the focal point for socialising in the town or region. The introduction of gaming machines had enabled many of these venues to remain viable, particularly given that the introduction of tougher drink driving laws in the late 80s and early 90s had a severe impact on these venues. To the extent that a large reduction or the complete removal of machines were to lead some of these venues to close, then these communities would lose an important social facility. Furthermore, the other benefits associated with these venues such as investment in sporting infrastructure and support for community organisations would be lost. In fact, one venue had provided support to local sporting organisations in part to ensure that an important segment of their customer base would not move to a nearby town, which demonstrates the important two-way relationship that exists between sporting groups and hotels/clubs.

Experience With Problem Gambling

All gambling venues acknowledged that problem gambling does exist, but consider it to be a relatively small problem, noting that the majority of people play within their means. They also tended to note that people experience problems with other forms of gambling, not just gaming machines (e.g., Keno, TAB); no doubt this is so, although it is well documented that EGMs contribute most to the creation of problem gamblers.

The various venues reported different levels of contact with problem gamblers, ranging from an average of 1 or 2 problem gamblers per year, up to 1 or 2 problem gamblers per month.

Respondents noted it can be difficult to tell who a problem gambler is because of differences in income levels: a person may gamble relatively heavily but may also have a relatively high income, meaning they do not spend beyond their means. Nonetheless, several respondents noted that the smaller and closer nature of the rural community, whereby you generally know more about peoples' backgrounds, does help to identify people that may be experiencing problems (i.e., spending beyond their means). It was suggested by another respondent that the smaller nature of country towns may actually help to curb problem gambling as people may be more cautious with their gambling in order to avoid being labelled or identified as a problem gambler.

Community and Local Assessment of Problem Gamblers

As the researchers have previously noted, many of the Provincial Cities tend to have relatively high per capita expenditure on EGMs but low average net incomes, implying that there is a greater prevalence of problem gambling. The Centre's model, using regional area EGM expenditure and income tax data indicates that many of the Provincial Cities have an above average level of problem gambling. These results "do not square with" the observations of venue operators who reported that they observe very few problem gamblers. However, venue owners and local people put forward several reasons/factors that may go some way to explaining the higher average expenditure in the Provincial Cities.

Several venues indicated that tourism would partly account for the higher average expenditure for their region. Some venues have significant accommodation facilities (e.g., three or four thousand bed nights per year; 26,000 house guests per year), which may not be typical of corresponding venues in the metropolitan area. One venue felt that the majority of their visitors originated from the metropolitan area. While no doubt for some venues in some locations, seasonal tourism could be a contributing factors, this can be tested for by an analysis of the weekly or monthly net gaming revenue to coincide with seasonal tourism patterns or special events.

Another suggested factor was the influence of the cash or black market economy. Being an agricultural area, there is a high degree of seasonal or casual work for which there may be a relatively higher degree of cash remuneration. Such income would not show up in taxation statistics, leading to an underestimation of net incomes, and therefore overestimation of the number of problem gamblers.

Interestingly, one respondent felt that the gambling environment was not similar throughout the Provincial Cities, let alone between the metropolitan and non-metropolitan areas of the State. It was suggested that higher expenditure or problem gambling in some areas might reflect socio-economic issues (e.g., high unemployment, poor economic performance), whereas in their region relatively high expenditure may partly reflect solid economic growth given the strong performance of the agricultural sector in the recent past.

4. Reductions in Electronic Gaming Machine Numbers in SA

4.1 Management of Machine Reductions

Concerns about problem gambling, together with evidence of an apparent link between EGM density and the extent of problem gambling¹⁰ led to the adoption of reductions in the numbers of EGMs as a harm minimisation measure. Under the *Gaming Machines (Miscellaneous) Amendment Bill 2004*, a total of 3,000 gaming machines are to be removed from South Australia through an initial removal of about 2,200 gaming machines on 1st July 2005, and thereafter by the gradual removal of machines through successive trading rounds.

The removal of machines from venues on 1st July 2005 proceeded according to the following formula:

- For hotels, the following reductions applied according to the number of gaming machines the venue had been approved to operate:
 - 29 machines and over – reduced by 8 machines;
 - 21 to 28 machines – reduced to 20 machines; and
 - 20 machines or less – no reduction.
- No reduction in the number of gaming machines applied for non-profit associations such as clubs and community hotels.

The reduction in machines was achieved by granting venues gaming machine entitlements according to the above formula. A gaming machine entitlement permits the holder of the entitlement to operate 1 gaming machine under a gaming machine licence. While no new gaming machine entitlements can be approved under the new legislation, gaming machine entitlements can be sold through a newly established trading system.

A total of 2,168 gaming machines were removed from the State as a result of the compulsory reduction from 1st July 2005 (a further 27 were cancelled as a result of the first trading round).

The remaining machines that are required by legislation to be removed from venues (about 800 machines) will be progressively removed through the trading system. Under this system, licensees apply to sell and buy gaming machine entitlements with these applications being matched through a ‘pooling system’.¹¹ The rules of the pooling system are complex and we do not go in to the detail of the trading system here. Nonetheless, in terms of the removal of machines, 25 per cent of the total amount of entitlements offered for sale in any trading round are withheld. Of these withheld entitlements, a proportion are cancelled while the remainder are transferred to the holder of the special club licence – Club One. The proportion of entitlements cancelled is calculated based on the proportion of *total* entitlements offered for sale that are offered by *for-profit* venues.¹²

¹⁰ “There is a very high correlation between the density of EGMs in SLAs and net revenue (or the amount lost). Variations in net revenue across the metropolitan area cannot be accounted for by variations in demographic characteristics across those regions. The relationship between EGM densities and losses holds very strongly even after demographic factors have been statistically controlled. There was a clear positive association between the distribution of problem gambling clients and the density of EGMs. Overall, the study provides reasonable evidence to support the existence of a positive association between gambling related harm and EGM numbers.” (Delfabbro, 2003, pp. 41-42).

¹¹ Buyers purchase a gaming machine entitlement at the fixed cost of \$50,000 per entitlement while the amount received by sellers is equal to the gross proceeds from sales divided by the total amount of entitlements sold and withheld.

¹² For example, if 100 entitlements are offered for sale by 80 for-profit venues and 20 not-for-profit venues, then of the 25 entitlements withheld (25 per cent of 100 entitlements), 20 entitlements will be cancelled (80 per cent of 25 entitlements), while 5 entitlements will be transferred to Club One (20 per cent of 25 machines).

Table 4.1 summarises the outcomes of the two trading rounds that have so far been conducted (both in 2005). Demand to buy gaming machine entitlements has far exceeded the supply of entitlements for sale. In the first round, 186 venues applied to buy 1,346 entitlements compared to 21 venues offering to sell 169 entitlements, while in the second round 149 venues offered to buy 976 entitlements compared 10 venues offering to sell 75 entitlements.

A total of 61 entitlements were withheld over the two trading rounds with 34 of these entitlements being cancelled and 27 being transferred to Club One.

Table 4.1
Outcomes of the First Two Trading Rounds

Round	Number of entitlements offered for sale			Number of entitlements offered to buy	Entitlements withheld		
	For-profit venues	Not-for-profit venues	Total		Cancelled	Transferred to Club One	Total
First	107	62	169	1,346	27	15	42
Second	26	49	75	976	7	12	19

Source: OLGC Bulletin.

The cancellation of 34 entitlements means that a total of 2,202 gaming machines have now been removed from the State under the *Gaming Machines (Miscellaneous) Amendment Bill 2004* (2,195 were removed by 1st July 2005: 2,168 from compulsory reduction; 27 from first trading round). With 798 machines still being required to be removed, the relatively small number of entitlements being cancelled through the trading rounds suggests that it may take many years before the target of removing 3,000 machines is finally achieved. For example, if we assumed that two trading rounds are conducted per year, and that the average number of entitlements cancelled per round equals the average number cancelled over the first two rounds (i.e., 17 machines), it will take a further 23 years to remove the 798 machines needed to achieve the required total reduction of 3,000 machines.

Given that there has already been a significant fall in the total number of gaming machine entitlements offered for sale between the first and second trading rounds (from 169 to 75 entitlements), it will be interesting to see how the supply of gaming machines for sale changes over subsequent trading rounds. With there being a fixed price for the sale of a gaming machine entitlement (\$50,000 per entitlement), it is likely that the supply of entitlements for sale will decline as the aggregate pool of gaming machines falls after subsequent trading rounds (since, *ceteris paribus*, average net gambling revenue per machine will rise, increasing the opportunity cost of selling a machine). This implies that it will take longer to achieve the required reduction in gaming machines than the calculations presented above suggests.

In the Provincial Cities, three venues have sold entitlements in the two trading rounds, with 26 venues seeking to purchase entitlements. The resulted in 16 entitlements being sold (11 in the first round and 5 in the second) leaving one venue with no entitlements. Four entitlements were sold by for profit venues and 5 by not-for-profit (with the status of the remaining venue not disclosed in the OLGC data). Venues in the Provincial Cities were successful in purchasing 19 entitlements, 16 in the first round and 3 in the second (see Table 4.2). No venue was successful in both rounds, meaning that 19 venues have each purchased one entitlement. All of the venues purchasing entitlements were for-profit venues which lost entitlements in the compulsory removal of machines.

Table 4.2
Outcomes of the Machine Reduction Process in the Provincial Cities

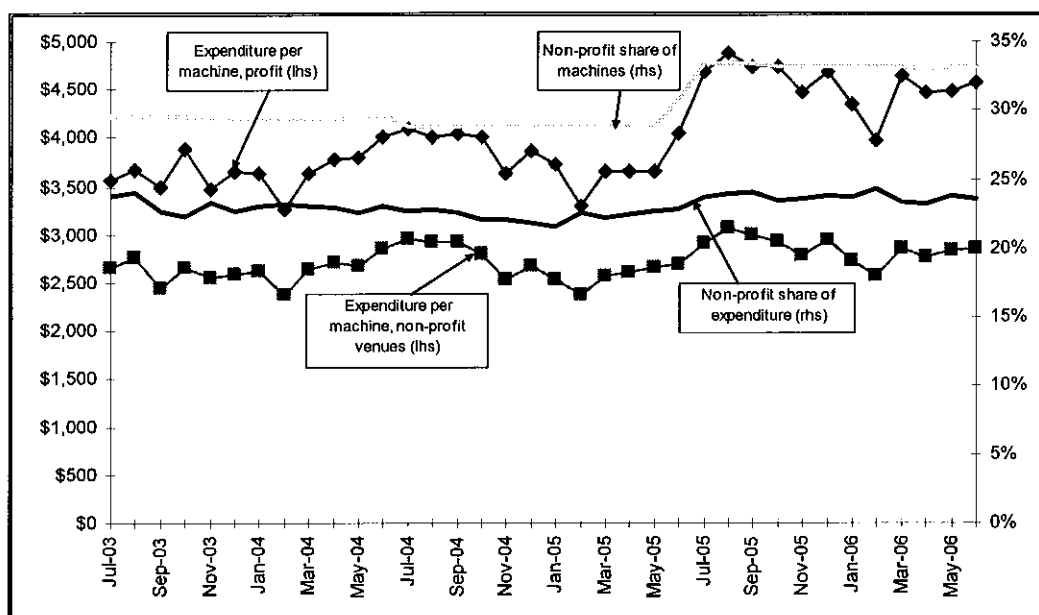
	EGMs at March 2005	Compulsory Reduction	1 st Trading Round	2 nd Trading Round
Berri Barmera	184	-8		
Loxton Waikerie	148	-4	-4	
Mt Gambier	424	-77	+7	
Murray Bridge	160	-22		
Port Augusta	305	-38	-5 ^b	+1
Port Lincoln	225	-37	+3	-5
Port Pirie	260	-40		
Renmark Paringa	160	-16		
Victor Harbor	128	-23	+1	+1
Whyalla	216	+3 ^a	+3	+1

Note: ^a Existing for profit venues lost 29 machines, but a new venue (whose entitlements presumably pre-dated the cap) opened with 32 entitlements.

^b 7 entitlements were sold and 2 entitlements purchased in Port Augusta during this trading round.

Source: OLG, unpublished data

Figure 4.1
Net Gaming Machine Numbers and Revenue per Machine, Provincial Cities
Profit and Non-profit Venues (\$ nominal and % of total)



Source: OLG, unpublished data

The relative trends for profit and non-profit venues¹³ for the Provincial Cities is interesting. The data appears to show that there has been little or no switching in venues as a result of the reductions in machine numbers in the for profit sector. Although the growth rate of revenue in non-profit venues was high at 7 per cent, this was in line with previous years. Despite the significant increase in the proportion of machines in the Provincial Cities in non-profit venues, their share of revenue has barely changed, whilst revenue per machine has jumped in for profit venues.

¹³ In this context, community hotels are treated as non-profit.

Looking at the trends for individual non-profit venues, growth rates have varied widely, from a fall of -19.2 per cent to an increase of 54 per cent. The strong aggregate growth in revenue for non-profit venues was driven by mid-sized venues; revenue of venues with 21-35 machines grew by 11 per cent and that of venues with 15-20 machines by 19 per cent. Large non-profit venues (36-40 machines) account for a disproportionate share of non-profit revenue with 54 per cent of revenue from only 37 per cent of machines. However, in 2005-06 they grew more modestly than the average of 4.4 per cent. Aggregate revenue for small venues only increased by 2 per cent over the same period.

4.2 Impact of reduction on South Australia

Since the reduction of gaming machines on the 1st of July 2005, net gaming revenue has continued to increase, although the rate of increase – 0.2 per cent – was lower than that of both inflation and previous years' increases in NGR. This higher aggregate expenditure occurred through simply gambling on existing machines more intensively. As a consequence average expenditure per machine increased sharply from \$50,792 in 2004-05 to \$59,625 in 2005-06. As well, any 'negative' impact of the reduction in machines on aggregate expenditure will have been minimised to the extent that venues have acted commercially and removed their least profitable machines.

The data in Table 4.3 also suggests that there is no apparent correlation between the percentage change in EGM numbers and the change in net gaming revenue. For example, Renmark Paringa lost 10 per cent of its machines, but saw revenue actually increase by 5.4 per cent. The Provincial Cities as a whole, unlike the Adelaide metropolitan area or rural South Australia, saw expenditure increase albeit at a slower rate than the historical average.

Table 4.3
Impact of the Reductions in Electronic Gaming Machine Numbers

	2004-05		2005-06		Change in machine numbers	% change in machines	% change in expenditure
	No of EGMs at 30 June	Total NGR	No of EGMs at 30 June	NGR			
Adelaide	9,292	584,802,143	8,151	583,609,481	-1,141	-12.3	-0.2
Berri Barmera	184	8,035,218	176	8,071,654	-8	-4.3	+0.5
Loxton Waikerie	144	4,263,777	144	4,423,230	0	0.0	+3.7
Mt Gambier ^a	411	17,615,115	388	17,158,805	-23	-5.6	-2.6
Murray Bridge	160	9,560,602	138	9,330,249	-22	-13.8	-2.4
Port Augusta	282	9,416,149	268	9,706,292	-14	-5.0	+3.1
Port Lincoln	211	9,151,608	183	9,310,217	-28	-13.3	+1.7
Port Pirie	236	8,771,912	220	9,188,154	-16	-6.8	+4.7
Renmark Paringa	160	5,476,780	144	5,773,934	-16	-10.0	+5.4
Victor Harbor ^a	252	9,893,724	226	12,529,536	-26	-10.3	+26.6
Whyalla	242	13,351,086	220	14,742,606	-22	-9.1	+10.4
Provincial Cities	2,282	95,535,972	2,107	100,234,676	-175	-7.7	+4.9
Rural	2,432	66,822,081	2,292	64,475,378	-140	-5.8	-3.5
SA Total	14,006	747,160,197	12,550	749,072,470	-1,456	-10.4	+0.2

Note: ^a In order to protect the confidentiality of venues regarding their gaming revenue, for the purposes of this data analysis Mt Gambier has been combined with the District Council of Grant, and Victor Harbor with the District Councils of Yankalilla and Kangaroo Island (and these aggregations are carried over into the Provincial Cities total).

Source: OLGC, unpublished data

So, it is not simply a matter of lower machine densities per capita that give rise to higher expenditure per machine, an observation that found support in Victoria when under the regional caps policy, lowering machine densities actually resulted in an increase in regional expenditure. One reason for this result was that the machine utilisation rate was found to increase. That is to say, the least profitable and oldest machines were removed and the remaining machines were used more intensively (SACES; 2004).

In order to test the effect that the reduction may have had on NGR we modelled the trend in EGM expenditure for SA using monthly data for South Australia covering the period from January 2000 to June 2006. The variables tested for their impact on the level of expenditure over time were the numbers of venues and machines, a time trend, dummy variables to captures the impact of different months, and the level of non-electronic gaming machine retail turnover. The resulting model performed well against the usual measures of significance, and as such is a good model for the behaviour of expenditure over time (see Appendix A for more detailed results).

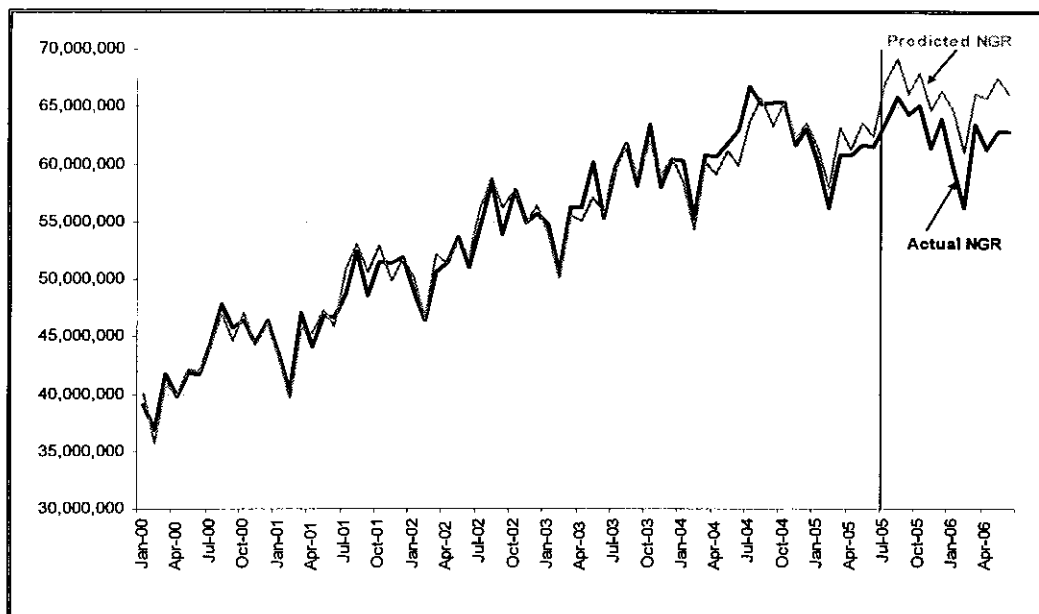
Using the results of the model it is possible to estimate what would have happened to expenditure had the number of machine not been reduced. This is done by using the results of the model and actual data on the factors influencing NGR to project a series of expenditure - 'Predicted NGR'. In order to estimate what would have happened had machine numbers not fallen, for the purposes of the projection machine numbers and venues are assumed to have remained at their March 2005 level (when the peak number of machines was reached) for the remainder of the period.

As can be seen in Figure 4.2, the actual and simulated expenditures track are very close, until the reductions in machine numbers begin to occur after March 2005. Over the course of 2005-06, the actual level of expenditure of \$751 million is \$42 million less than predicted by the model. This suggest that the reductions in machine numbers across South Australia have made a tangible impact on expenditures, reducing them by 5.3 per cent from where they might have been. However this also suggests that reducing machine numbers, at least when machines and venues remain highly prevalent even after the reduction,¹⁴ is not particularly effective in reducing expenditure. In order to achieve this 5.3 per cent reduction for South Australia, machine numbers have been reduced by 10.4 per cent.

It is impossible to determine whether the reduction in EGMs has had any impact on problem gambling. The reduction in EGMs has increased the intensity of machine use (as demonstrated by the increase in expenditure per machine). In theory, that might reduce problem gambling by causing some problem gamblers to leave venues after having difficulty obtaining access to a machine. Where the reductions in machine numbers reduces the expenditure of non-problem gamblers it reduces community welfare as their recreation choices are being restricted. Where the expenditure of problem gamblers is reduced then there are benefits to society, both directly from the reduced 'involuntary' expenditure, and indirectly through reductions in the social harms related to problem gambling.

¹⁴ The reduction so far has only returned machine numbers to the level they were at in March 2000, when the Hon Rory McEwen's freeze Bill was introduced. And even when the full reduction target of 3,000 machines is eventually reached (after x years based on current trends) there will be more machines operating in SA than there were when the Hon Nick Xenophon's freeze Bill was introduced in November 1998.

Figure 4.2
Monthly Net Gaming Machine Revenue, South Australia
Actual and Projected (\$ nominal)



Source: OLGC unpublished data, ABS, calculations by researchers

The total impact could range from the extremes of all of the reduction being reduced expenditure by problem gamblers through to no impact on the NGR from problem gamblers. The actual impact is likely to lie somewhere between these two extremes, but the nature of problem gambling suggests that problem gamblers are likely to be more committed and therefore any capacity constraints are likely to disproportionately reduce the expenditure of infrequent, non-problem gamblers. As problem gamblers are estimated to account for 42 per cent of total NGR (Productivity Commission, 1999) then it would be reasonable to assume that the share of the reduced expenditure by problem gamblers is somewhat less than that.

4.3 Impact of reduction of machine numbers on the Provincial Cities

The picture in South Australia's Provincial Cities was similar to the state as a whole, albeit with a smaller impact. Since the reduction of gaming machines on the 1st of July 2005, net gaming revenue in the Provincial Cities also continued to increase and at \$93.6 million was up 2 per cent on the previous year (although the rate of increase was lower than the 3.6 per cent in the previous year). As a consequence average expenditure per machine increased by 14.6 per cent, from \$41,782 in 2004-05 to \$47,879 in 2005-06.¹⁵

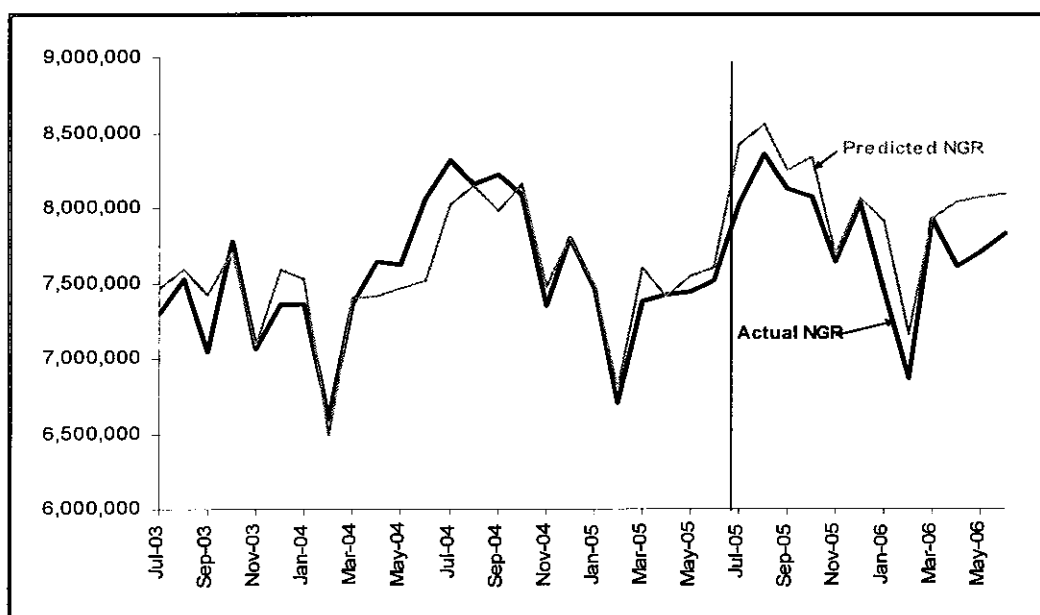
As with the State as a whole, in order to get a sense as to the true impact of the reductions in EGMs on expenditure, we undertook inferential analysis to develop a model of those factors influencing monthly NGR in the Provincial Cities. The dataset we hold which is disaggregated to the level of the Provincial Cities spans a shorter time period, but the model was still a good fit for the data.

¹⁵ Note the data for this section does not match that for Table 4.3 as, unlike the Table, data for the econometrics was only for the Provincial Cities and did not include those regions added to Mount Gambier and Victor Harbor to protect venue confidentiality.

As with the previous analysis, actual NGR was compared with the results extrapolated from the model assuming that EGM numbers had remained at their March 2005 level. Comparing these two sets of expenditure data suggests that the reductions in machine numbers led to a \$2.9 million reduction in NGR. Whilst this is a reasonable impact, at 3 per cent it is much less significant than that achieved for the State as a whole. The reduction is even less significant given that in order to achieve it EGM numbers in the Provincial Cities fell by 11.5 per cent.

As with the broader results, some of this reduction will have resulted from reduced expenditure by problem gamblers – a benefit for the state – and some from reduced expenditure by non-problem gamblers, a reduction in social welfare.

Figure 4.3
Monthly Net Gaming Machine Revenue, Provincial Cities
Actual and Projected (\$ nominal)



Source: OLGC unpublished data, ABS, calculations by researchers

At the most optimistic end of the spectrum of possibilities – that all of the reduction in expenditure was due to problem gamblers ceasing to gamble – then this would represent 272 fewer problem gamblers in the Provincial Cities, or a fall of 5.9 per cent. Thus for the Provincial Cities the numbers of problem gamblers are likely to have fallen by somewhere between 0 and 5.9 per cent. Of course this optimistic number is extremely unlikely to hold as it is hard to see how reductions in machine number could stop problem gamblers from accessing machines, but have no impact on non-problem gamblers. Indeed, as problem gamblers are likely to be more committed than other gamblers it is likely that they would be less effected by any congestion caused by machine reductions as they would simply return later or move to another venue.

4.4 Venues' Views: Machine Reductions and Impact on Problem Gambling

Basically all respondents indicated that there were no obvious signs of any change in problem gambling over the past year. The difficulty of identifying problem gamblers may partly account for this. While not suggested by any of the respondents, it may also reflect that there has been no significant decline in the number of gaming machines in the region. All the venues consulted in the region had not suffered a loss of machines reflecting their ownership structure – i.e., community hotels and clubs – which meant that the majority of venues in the region were unaffected by the compulsory removal of machines. Only a small number of machines were removed from the region.

All respondents were basically of the opinion that a reduction in gaming machines would have little to no effect on problem gambling. Problem gamblers would simply change their behaviour in order to continue gambling, either by waiting for a machine, visiting another venue, and/or visiting at a different time of the day or week. It was noted by at least one interviewee that the absence of any decline in expenditure following the compulsory removal of machines was evidence that the removal of machines had little effect. It was also suggested that the availability of other forms of gambling would mean that problem gambling would persist to some extent, while problem gambling may partly reflect other socio-economic factors that may manifest themselves in other socially destructive forms.

It was noted by several respondents that there would have to be a significant reduction in gaming machines in order for there to be a significant impact on problem gambling. However, such a reduction was not considered practical or fair given the adverse impact this would have on venue viability and the other adverse social impacts this may have.

The majority of venues indicated that gaming machines were vital to their viability, with one saying that it is impossible to profitably operate a hospitality venue without gaming machines. Completely or significantly removing machines – e.g., by up to 50 per cent or more in some regional areas as was implied by the formula of 10 machines per 1,000 adults as recommended in an earlier Provincial Cities submission to the IGA – was not considered practical given that it would cause some smaller venues to close, including possibly some larger venues that carry significant debts (i.e., in the millions). While this may curb problem gambling, it may have other adverse social consequences that are discussed in section 3.3 *Benefits of Gaming Machines*.

The majority of venues felt that the number of gaming machines in the region was about appropriate, while one medium-sized venue indicated that there could potentially be some reduction in machines. On the other hand, another medium-sized venue had a desire for more machines given the significant level of competition in the region, and the important role that having a variety of machines plays in attracting customers.

Trading System

Given that respondents had little to no involvement with the trading system, there were few comments made in relation to the operation or effectiveness of the trading system. It was felt by one medium-sized venue that the trading system had simply allowed very small non-viable venues to exit the market. It was questioned whether providing a windfall to a small business that was operating at a loss was the intended purpose of the trading system.

One venue noted that there had been some discussion of raising the stipulated price to purchase gaming machines entitlements (e.g., up to \$100,000) in order to encourage venues to sell machines. This was considered unfair in circumstances where a gaming venue is being leased – the price rise would encourage the lessee to sell, leaving the lessor with a potentially unprofitable venue. It would also be unfair to those venues that have already sold gaming machines.

Utilisation

The majority of respondents had not noticed any change in the utilisation of gaming machines over the past year. This may partly reflect that there were relatively few machines withdrawn from the region. One respondent noted that there was now a gambling culture which would be difficult to change without the removal of all electronic gaming machines.

The one change noticed by a majority of respondents was an increase or shift towards one-dollar machines. One respondent indicated that this may reflect an increase in demand for higher stakes gambling within the gambling population. Another respondent indicated that this shift had not been brought about by a change in the composition of machines, but they were looking to obtain a one-dollar machine in order to meet the shift in demand.

5. Conclusion

There is good evidence of a link between electronic gaming machine densities and gambling expenditure, which given that a large proportion — the Productivity Commission estimated 41 per cent — of NGR comes from problem gamblers also suggests a link with problem gambling. There is similar evidence linking regional expenditure with the distribution of BreakEven's client. This is not surprising, after all it is not possible to become a problem gambler without having gambled.

Due to these links, it was widely thought (including by the Centre) that a mandatory reduction in machine numbers would be an effective part of a harm minimisation strategy, particularly if it reduced the high EGM densities in some Councils (such as most of the Provincial Cities). Unfortunately the evidence to date suggest that EGM reductions, at least as they have been implemented, have not been effective. It is unclear how extensive any further reduction would need to be to have a meaningful effect. However the experience of two of the provincial cities in the current round of reductions where reductions of 13 per cent were accompanied by an increase in expenditure (Port Lincoln), or a slight fall (Murray Bridge) suggests that to have an impact any reductions would need to be substantial. For example to reduce the density of EGMs in Berri Barmera to 10 per 1000 adults would require a reduction of more than 50 per cent on current numbers.

Given these concerns we are not convinced that further machine reductions are a useful strategy for reducing the harm caused by problem gambling. Instead we are increasingly convinced that the way in which the harms from alcohol consumption are managed is the best model for gaming. This could be loosely characterised as a combination of public education; taxation to send signals (and fund the damage caused by alcohol misuse); and a requirement on retailers of alcohol to stop serving when the risk of harm becomes too high (e.g. when the patron is intoxicated).

The first two aspects of this approach are already used for gaming, but the third is not. The problem with placing a responsibility on the vendors is one of visibility; it is feasible to tell if a patron in a bar is drunk, it is not necessarily feasible to tell if someone playing an EGM has gambled too much. Similarly if a patron is ejected from a hotel or club for intoxication it is easy for other venues to identify this and not admit them. If a gaming venue was to ask someone to leave because they were gambling at harmful levels then there would be no way for other venues to know this and therefore enforce a similar ban.

In our view, the only way in which visibility could be achieved and proper consumer protection implemented is through smart card technology. The intent of public policy should be to assist all who choose to gamble on EGMs make rational decisions (about the time and money spent) prior to gambling on electronic gaming machines. It would be possible to issue anyone wishing to gamble with a unique smart card with pre-set spending limits (for example a \$100 or \$200 loss per fortnight) as a substitute for observation by venue staff. There could also be a procedure in place where those who could demonstrate that they could afford it would be able to apply to have the fortnightly cap increased. Of course procedures would need to be introduced for international and interstate tourists but this should not be too difficult.

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Appendix A

Results of Econometric Analysis of NGR

Model of the behaviour of NGR in South Australia

Variable	Coefficient	t-Statistic
Intercept**	44,544,741	2.41
No. of Venues**	-99,183.1	-2.27
No. of EGMs*	2,184.9	4.67
Time Trend*	191,089.7	4.49
February*	-4,246,718.	-7.37
March**	1,146,368.	2.00
May*	1,543,118.	2.69
July*	3,887,058.	6.32
August*	5,794,064.	9.36
September*	2,978,948.	4.78
October*	4,944,083.	7.96
November**	1,355,803.	2.19
December*	2,495,970.	4.05
Retail Trade*	0.027372	3.16
Adjusted R-squared	0.972313	
F-statistic	209.0090	
Prob(F-statistic)	0.000000	
Observations	71	

Note: * Significant at the 1% level
 ** Significant at the 5% level
 *** Significant at the 10% level

Adjusted R-squared is the most commonly used measure of significance for OLS regressions, measuring the proportion of the actual variation in the dependant variable explained by the estimated equation. The F-test statistic is a measure of the overall significance of the coefficients in the equation, hence the 'Probability F' is the probability that all of the coefficients other than the intercept are zero. As can be seen from the various test of significance this equation is a good model of the factors influencing the level of Net Gaming Revenue in South Australia.

Model of the behaviour of NGR in the Provincial Cities

Variable	Coefficient	t-Statistic
Intercept***	12,121,944	1.70
No. of Venues***	-177,696.4	-2.01
No. of EGMs**	1051.4	2.064208
Time Trend***	16,101.0	1.91
February*	-844,516.6	-9.28
July*	701,616.5	3.91
August*	807,581.3	8.99
September*	579,633.4	3.06
October*	719,521.1	8.35
December**	306,872.1	2.14
Retail Trade**	0.006	2.35
Adjusted R-squared	0.732530	
F-statistic	10.58558	
Prob(F-statistic)	0.000001	
Observations	36	

Note: * Significant at the 1% level
 ** Significant at the 5% level
 *** Significant at the 10% level

As with the state-wide results, the Adjusted R-squared and F-tests indicate that this equation is a good model of the factors influencing the level of Net Gaming Revenue in the Provincial Cities. That the model is not quite as good is expected given the smaller number of observations, and that some data such as retail trade is only available at the state-wide level; although trends for the provincial cities are likely to be similar there may well be some differences.