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MACHINE GAMING IN SYDNEY CLUBS

Machine Gaming in Sydney Clubs:

Characteristics of the Supporting Resident Populations

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Abstract

This research provided background for surveys and interviews in later stages of a 3 part project. It aimed to identify, from secondary research, socio-demographic characteristics which tend to support registered clubs and their machine gaming activities in the Sydney Statistical Division. Using multiple methods including: Pearson's Product Moment correlation, Principle Components factor analysis and stepwise regression, the study profiled Sydney populations which spend highly on gaming machines. The most important socio-demographic predictors of Sydney statistical local areas where per capita gaming machine expenditure is high are large proportions of the adult resident population who: were born in Malta, Greece, Lebanon, China, Italy, Vietnam, Yugoslavia, India or the Philippines; have no vocational or tertiary qualifications; are unemployed.

Keywords

Machine gaming – clubs – socio-demographic characteristics – gambling expenditure

Australian Gaming

This paper reports on a study that aimed to identify the socio-demographic characteristics that tend to support registered clubs and their machine gaming activities in Sydney, Australia. Gaming, all legal forms of gambling other than racing, has been one of the fastest growing industries in Australia in the 1990s, particularly in relation to machine gaming. Real gaming expenditure, that is with the effects of inflation removed, has more than doubled from Aus \$ 3,516 million in 1989-90 to Aus \$7,933 million in 1995-96. At the same time, real gaming machine expenditure has more than doubled from Aus \$1,659 million in 1989-90 to Aus \$4,607 million in 1995-96 (Tasmanian Gaming Commission, 1997).

The opportunities for gaming in Australia include: state lotteries, lotto, instant lottery, pools, keno, casino games, minor gaming, sportsbetting and gaming machines. Accessibility to gaming opportunities has increased in the 1990s, with the legalisation and introduction of gaming machines and approved amusement devices (AADs) into Australian states other than NSW, in both clubs and hotels, with the building of casinos in Melbourne, Brisbane, Cairns and Sydney and with the introduction of sportsbetting. Thus real gaming expenditure has increased as has the opportunity to participate in gaming.

This paper first provides an overview of previous Australian research on the socio-demographic characteristics of gaming machine players. It then examines the distribution of per capita gaming machine expenditure in registered clubs in the Sydney Statistical Division. The sources of data, measures used, statistical procedures and results are explained, followed by a discussion of the results and conclusions.¹

Australian Research on Gaming Machine Players

In spite of the popularity and continued growth of poker machine gaming, limited data have been collected about poker machine playing in NSW clubs, particularly relating to

the socio- demographic characteristics of club poker machine players. With club poker machine gambling representing about 77% of all gaming expenditure in NSW in 1995-96 (Tasmanian Gaming Commission, 1997) it is widely accepted that this type of gambling is responsible for loss of control amongst many people with gambling problems who present for treatment (Keys Young, 1995).

Three previous studies have developed a profile of club poker machine players - those by Caldwell (1972), Dickerson et al. (1984) and Lynch (1985). These studies were each restricted to members of one club, the Queanbeyan Leagues Club in NSW, the Southern Cross Club in the ACT and North Ryde RSL Club in Sydney, respectively. All three studies were mostly concerned with behavioural aspects of poker machine players, with limited attention devoted to socio-demographic characteristics.

Broad-based state surveys in Australia have provided additional data on gambling patterns, including those of gaming machine players. The main results of these studies suggest some common socio-demographic characteristics amongst gaming machine players.

The State Government of Victoria (1994) reported on poker machine playing in NSW and the ACT in order to assess the likely impacts of the introduction of electronic gaming machines (EGMs) in Victoria. Of the 3,000 respondents to their survey, 12.3 % reported expenditures on poker machines. The socio-economic profiles of these respondents revealed: the average expenditure of players was \$560 per year; males play twice as much as females, and spend considerably more; poker machine playing is quite common for all age groups, with the 20-24 year old and 65-69 year old age groups playing more often. Their results also indicated that: divorced and married people play poker machines the most; the incidence of machine playing is higher with no dependent children; wage earners, public renters and couples over 65 years have a higher incidence of playing; social factors other than income appear to play a significant role in machine playing; wage earners and those who earn most

of their income from assets spend more than average on poker machines; Asian born and European born people spend considerably more than average on poker machines; 'Big spenders' on poker machines tend to have below average income and are over-represented by recipients of social benefits, public renters, those living in one bedroom accommodation and those under 30 years of age (State Government of Victoria, 1994).

The Department of Family Services and Aboriginal and Torres Strait Islander Affairs (1995) administered a survey to 500 people in Brisbane, the capital city of the state of Queensland (QLD), collecting data on patterns of machine playing, social and economic well-being, demographic data and an analysis of characteristics of clients attending the Breakeven Centres for problem gambling. The main findings include: men were more likely to have played gaming machines than women; those under 25 years of age were more likely to have played than older people; employed people were more likely to have played machines than the unemployed, pensioners or those engaged in home duties; 10 % of players reported they play monthly or more often; 80% of players spend \$20 or less per session, while 6% spend over \$40 per session. Money for playing gaming machines came from household budgets for 25%; 20% of problem gamblers were women, with gaming machines being the preferred form of gambling for 70% of these; 80% of problem gamblers were men, with over 60% of male problem gamblers preferring betting more than gaming machines.

In NSW, research by the Australian Institute for Gambling Research (1996) of a stratified sample of 1,390 city and country residents indicated that: poker machines are the favourite form of gambling for 18% of men and women; 5.9% play poker machines weekly, 8.7% play monthly, 23.4% play less often and 62.0% never play; more men than women play poker machines at least weekly; more country residents than city residents play poker machines at least weekly; and the mean weekly spend on poker machines is around \$10. About 19% of men and 17% of women nominated poker machines as their favourite form of

gambling and 23.8% of single respondents, compared to 14.8% of partnered respondents, nominated poker machines as their favourite form of gambling.

In South Australia, Delfabbro and Winefield (1996) conducted a survey of community gambling patterns involving a random sample of 1,206 people, weighted to reflect the general state population. Their findings revealed that involvement in machine gambling was most strongly associated with: men or women aged 25-34 years; people in full-time employment; blue collar workers; with an annual household income of \$40,000-\$50,000. They also found that gaming machine players spent an average of \$14 per session, with 70% spending \$10 or less. Only 2% of machine players spent more than \$50 per session. The average gaming machine player spent \$305 per year.

The findings of the fourth study into community gambling patterns in Victoria (Market Solutions [Australia], 1997) revealed that: EGM use in 1996 increased from 32% of the sample in 1995 to 40% in 1996 with a rise in the number of regular EGM players. Higher proportions of regular EGM players are likely to: live in rural areas, be 'committed' gamblers; believe that gambling does more good than harm. The average time spent on EGMs is 85 minutes per visit; participation in gambling occurs on average once every three weeks and the average outlay is \$28 per visit. The longest amount of time spent using EGMs is by those who: are acknowledged 'committed' gamblers, European born, lower blue collar workers, high income earners. The highest spending EGM players include: high income earners (\$88 per week); 'social' gamblers (\$83 per week); UK/USA born (\$70 per week); and 50 - 59 years (\$58 per week).

While direct comparisons across these studies is difficult due to the different methodologies employed, gaming machine play appears to be the most favoured form of gambling for a substantial minority of people, and has higher than average participation rates amongst males, those in the 20-34 year and over 60 year old age groups, blue collar workers

on low to medium incomes and those with no dependent children under 14 years. The findings also suggest that some ethnic groups are more inclined to play gaming machines than others.

While the studies cited above provide very useful broad-based patterns of gambling at the state and national levels, the present study was a first attempt to explore the socio-demographic characteristics which support poker machine gaming in registered clubs in the Sydney Statistical Division.²

In 1995-96, there were 602 registered clubs in Sydney (42% of all NSW clubs) with 31,931 poker machines with an average profit per machine of \$40,793, about 62% higher than that of NSW country areas. In Sydney, club poker machines earned \$13 billion in revenue, paid \$281 million in taxes and generated \$1.3 billion in club profits. The Sydney club profits represent about 61% of all NSW club poker machine profits (NSW Department of Gaming and Racing, 1997:18). Thus, while the majority of registered clubs are located in rural NSW, the concentration of poker machines is in Sydney. Therefore, Sydney was selected as the geographical focus for this research. A key research question is what type of people spend money on poker machines in Sydney? This paper will endeavour to address this question. It will investigate the socio-demographic characteristics that tend to support poker machine gaming activities in registered clubs in the Sydney Statistical Division.

The aim of this study was to examine the socio-demographic characteristics which tend to support poker machine gaming in registered clubs in the city of Sydney, called the Sydney Statistical Division, a local government geographical term. Specifically, this study analysed secondary data from a Sydney census, to identify distinctive socio-demographic features of adult resident populations in Sydney statistical local areas which are associated with high levels of poker machine expenditure per head of population.

Methods

Three sets of data were needed for this study. The first set consisted of poker machine expenditure for each Sydney Statistical Local Area (SLA), sourced from the NSW Department of Gaming and Racing. The second set consisted of selected socio-demographic characteristics for each Sydney SLA which was sourced from Census data from the Australian Bureau of Statistics (ABS). The third set was a list of all registered clubs in Sydney from the Registered Clubs Association of NSW. Their postcodes were used to locate them in the various Sydney SLAs.

Poker machine expenditure is the net amount spent, or the amount wagered less the amount won, by poker machine players. By definition, poker machine expenditure is the gross profit or gross winnings due to the operators of poker machines (Tasmanian Gaming Commission, 1997:2). Poker machine expenditure data were obtained from the NSW Department of Gaming and Racing for the 1994-95 financial year. For confidentiality, the poker machine expenditure data were only available for groups of 20 clubs or more. Because some SLAs had fewer than 20 clubs, it was necessary to group some neighbouring SLAs together for the purpose of this analysis. These groups are referred to as Statistical Local Groups (SLGs).

Selected socio-demographic characteristics for each Sydney SLG were sourced from Census data from the Australian Bureau of Statistics (ABS). The most recent published Census data at the time of the study was in 1991, so much of the analysis was based on projections provided by the ABS of socio-demographic characteristics in the various Sydney SLAs.

To examine poker machine expenditure per head of population for each SLG, poker machine expenditure was divided by the population of each SLG to obtain the per capita poker machine expenditure. This was necessary for comparative purposes as Sydney SLGs

do not have equal populations. Only the population aged 15 years and over was used, referred to hereafter as the adult population. While the legal age for entry into premises licensed for poker machine gaming and liquor is 18 years, the ABS includes these people in the 15 to 19 year old age group.

The Inner Sydney SLA was removed from the analysis as it was considered an outlier due to its disproportionately high poker machine expenditure per head of adult population (\$8,451.35). Inner Sydney has a large number of clubs but a small resident population. Many clubs in this area have a wide trading area, largely supported by city workers, commuters, shoppers, tourists and day trippers. Given the potential distortion of the research results, Inner Sydney was excluded from all analysis of the socio-demographic characteristics which support poker machine expenditure, as it would have been impossible to gain a clear picture of the resident poker machine expenditure in Inner Sydney SLA.

When the per capita poker machine expenditure for each Sydney SLG was obtained, the analysis then examined the socio-demographic characteristics associated with this expenditure. The dependent variable for this analysis was the per capita poker machine expenditure for each Sydney SLG while the independent variables were the selected socio-demographic characteristics listed in Table 1.

Table 1

As Sydney SLGs do not have equal populations, proportions of populations were used in each Sydney SLG to allow comparisons between SLGs. As well, there was a high degree of intercorrelation between variables. Thus a five stage procedure was needed to clearly identify the socio-demographic characteristics of the populations in Sydney SLGs which support poker machine gaming in Sydney registered clubs, while controlling for type 1 errors. The five stages were:

1. Pearson's Product Moment correlation was used to explore any associations between the dependent variable and each of the independent variables, unadjusted for partial correlations. The significance level for this procedure was set at $p \leq 0.01$.
2. Principle Components Factor analysis (varimax rotation) of sets of the independent variables was then used to reduce the incidence of partial correlation between these variables and the incidence of type 1 errors. Based on this factor analysis, 30 new variables were deducted which each represent a set of independent variables that are highly intercorrelated.
3. Pearson's Product Moment correlation was used to determine whether any partial correlations existed between the 30 derived variables. The significance level for this procedure was set at $p \leq 0.01$.
4. Given that some of the 30 derived variables were intercorrelated and the risk of type 1 errors was still apparent, a second Principle Components Factor analysis was conducted to derive 11 variables which each represent a set of independent variables which are highly intercorrelated.
5. These 11 variables were then used as possible predictor variables in a stepwise regression analysis with the dependent variable. The significance level for this procedure was set at $p \leq 0.01$.

Correlates and Predictors of Per Capita Poker Machine Expenditure

Correlation Analysis

The results of the Pearson's Product Moment correlation between the per capita poker machine expenditure for each Sydney SLG and the selected socio-demographic characteristics are shown in Table 2.

Table 2

From Table 2, positive correlates of per capita poker machine expenditure in Sydney are high proportions of the resident population who: are not qualified; are unemployed; are tradespersons, plant and machinery operators/drivers, or labourers or related workers; have a gross annual household income of \$12-25K; were born in Lebanon.

From Table 2, negative correlates of per capita poker machine expenditure in Sydney are high proportions of the resident population who: are aged 45-49 years; have a higher degree, postgraduate diploma, bachelor degree or undergraduate degree as their highest educational qualification; are managers or professionals; have a gross annual household income of \$100K or over.

First Factor Analysis

Due to the high usual incidence of cross-correlation between socio-demographic characteristics, the independent variables listed in Table 2 were subjected to factor analysis. From the factors extracted, 30 new sets of variables were derived as shown in Table 3. These derived variables therefore each represent a set of highly intercorrelated socio-demographic independent variables.

Table 3

In order to check whether intercorrelations existed between the 30 derived sets of variables, a correlation matrix of these 30 variables was examined and on finding intercorrelations, a second factor analysis was conducted, as described below.

Second Factor Analysis

To reduce the incidence of cross-correlation between the 30 sets of derived variables (Table 3), a second factor analysis was conducted. From the factors extracted, 11 final variables were derived as shown in Table 4. Thus, the final derived variables each represent a set of highly intercorrelated socio-demographic independent variables which were then used as possible predictors of the dependent variable.

Table 4

Regression Analysis

Stepwise multiple regression analysis was used to explore the relationship between the 11 final derived socio-demographic independent variables and the dependent variable, per capita poker machine expenditure per Sydney SLG. Analysis was performed with SPSS REGRESSION.

The most important result of this research is shown in Table 5. This result shows that one variable (lower class NESB) explained 56 percent of the variance in the per capita poker machine expenditure per Sydney SLG. The only significant variable, the derived variable called lower class NESB, was the best predictor of high per capita poker machine expenditure per Sydney SLG. This significant variable, lower class NESB, consisted of high proportions of the population who: were born in Malta, Greece, Lebanon, China, Italy, Vietnam, Yugoslavia, India or the Philippines; have no vocational or tertiary qualifications; are unemployed.

The regression equation reported was significant at $p \leq 0.001$.

Table 5

Comparison of Current Findings with Prior Australian Research

The current study found a number of predictors of per capita poker machine expenditure in Sydney SLGs. With ethnicity, the study identified particular ethnic groups associated with high average poker machine outlays. SLGs in Sydney with high proportions of people born in Malta, Greece, Lebanon, China, Italy, Vietnam, Yugoslavia, India or the Philippines appear to disproportionately contribute to high expenditure on poker machines. With education and employment status, those SLGs with high proportions of people with no

vocational or tertiary qualifications and who are unemployed, also appear to have high poker machine expenditure.

While these results broadly support previous profiles of gaming machine players as predominantly from lower socio-economic groups, more specific comparisons are difficult due to the different variables examined in previous Australian research.

In terms of country of birth, the State Government of Victoria (1994), DBM Consultants (1995) and Delfabbro and Winefield (1996) examined its relationship with poker machine expenditure. The State Government of Victoria (1994) study reported a link between ethnicity and poker machine expenditure, concluding that Asian born and European born people spend considerably more than average on poker machines. The findings of the fourth study into community gambling patterns in Victoria (Market Solutions [Australia], 1997) stated that European born gamblers were among those who spent the highest amount of time on EGMs.

Other studies which have examined this relationship used an insufficient sample size or too broadly based ethnic groupings to allow specific ethnic groups to be examined. For example, DBM Consultants (1995) categorised country of birth as Australia/New Zealand, UK/North America, Europe, Middle East/Africa, Asia and Other. Similarly Delfabbro and Winefield (1996) used categories of Australia/New Zealand, UK, Other Europe, Asia/Pacific, and Other. Such broad categories may well have obscured any relationship between country of birth and poker machine expenditure.

In terms of educational and vocational qualifications, no Australian studies reviewed here appeared to examine their relationship with poker machine expenditure. While questions relating to educational qualifications were included in the South Australian survey (Delfabbro & Winefield, 1996), no significant results between this variable and gaming machine expenditure were reported.

Contradictory results have been found amongst previous and current studies concerning employment status. For example, the State Government of Victoria (1994) found that recipients of social benefits (not necessarily unemployment benefits) were over represented amongst 'big spenders' on poker machines. The Department of Family Services and Aboriginal and Torres Strait Islander Affairs (1995) found that employed people were more likely to have played machines than the unemployed, pensioners or those engaged in home duties. Delfabbro and Winefield (1996) revealed a significant association between 'non-worker' status and the frequency with which people gambled on poker machines. However this association was mostly due to the 'retired' component of the 'non-worker' category. Their analysis of participation rates in poker machine gambling revealed that employed people were significantly more likely to have gambled on the machines in the previous 12 months.

Conclusions

The key question this research addressed was what type of people spend money on poker machines in Sydney? The most important results indicate that the best predictors of per capita poker machine expenditure in Sydney SLGs were high proportions of the resident population who were born in Malta, Greece, Lebanon, China, Italy, Vietnam, Yugoslavia, India or the Philippines; have no vocational or tertiary qualifications; or are unemployed. Also important is that the profile of Sydney populations which spend highly on poker machines broadly supports the lower socio-economic profile identified in previous Australian studies.

It is important to note that this study had the following limitations:

1. For reasons of practicality, only the most numerous ethnic groups by country of birth were examined, as the populations of other ethnic groups were too small for

any results to be reliable. Two Victorian studies have reported that spending more than the average amount of both time and money on EGM gambling is linked to being European born and there is evidence in this research to support that link. Those born in Malta, Greece, Italy and Yugoslavia are European born but this link has not been established previously in NSW as a characteristic supporting high poker machine expenditure. Further evidence is needed to determine if this link is supported by research on individuals born in Europe.

2. The study aimed to provide only a broad-based profile of those areas in Sydney which support poker machine gaming in registered clubs, so the analysis is based on populations, rather than individuals. Further research is necessary to establish whether the socio-demographic characteristics associated here with high levels of poker machine expenditure apply at the individual level, to investigate poker machine expenditure per capita in the Inner Sydney SLA, and poker machine expenditure per capita in populations of other ethnic groups. In addition, the data analysis was based only on the resident population in the Sydney SLAs and did not take into account poker machine expenditure by tourists.

3. Proportions of populations were used in each Sydney SLG to allow comparisons between SLGs, as Sydney SLGs do not have equal populations. As a result, the analysis could not distinguish effects of some variables, such as gender, on poker machine expenditure, as there are roughly equal proportions of males and females in each Sydney SLG.

Despite these limitations, this study has provided useful background on the socio-demographic characteristics associated with poker machine expenditure in Sydney.

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Footnotes

¹ The terms gaming machine, poker machine and electronic gaming machine are all used to refer to the same thing, a slot machine in the USA. Australian states call gaming machines by different names, notably poker machines in New South Wales and the ACT, electronic gaming machines in Victoria and Tasmania and gaming machines in Queensland and South Australia. In the remainder of this paper, the relevant state name is used.

² Sydney is the capital city of NSW and the most populous city in Australia.

Table 1Independent Variables in the Study

Independent variables	Categories used
Age	in 5 year increments
Sex	Male, female
Marital status	never married, married, separated, divorced, widowed
Housing status	owned, purchasing, Department of Housing rental, other government rental, private rental
Highest educational qualification	higher degree, postgraduate diploma, bachelor degree, undergraduate diploma, associate diploma, skilled vocational, basic vocational, not qualified
Employment status	employed, unemployed
Occupation	manager, professional, para-professional, tradesperson, clerk, sales & personal service worker, plant & machinery operator/driver, labourer & related worker
Household income	\$0-8K, \$8-12K, \$12-16K, \$16-20K, \$20-25K, \$25-30K, \$30-35K, \$35-40K, \$40-50K, \$50-60K, \$60-70K, \$70-80K, \$80-100K, \$100-120K, \$120-150K, \$150K+
Country of birth	Australia, Canada, Ireland, New Zealand, South Africa, United Kingdom, United States, China, Germany, Greece, Hong Kong, India, Italy, Lebanon, Malaysia, Malta, Netherlands, Philippines, Poland, USSR, Vietnam, Yugoslavia. (note: only the 22 most numerous countries of birth were used, with the remaining categorised as 'other')

Table 2Correlation Coefficients Between Per Capita Poker Machine Expenditure in Sydney SLAs and Selected Socio-Demographic Characteristics

Socio-demographic characteristics	r value	p value ≤
Age:		
0-14 years	.1124	.647
15-19 years	.0218	.929
20-24 years	.4042	.086
25-29 years	.3567	.134
30-34 years	.2972	.217
35-39 years	.0532	.829
40-44 years	-.3606	.129
45-49 years	-.6183	.005*
50-54 years	-.4790	.038
55-59 years	-.0911	.711
60-64 years	.1838	.451
65-69 years	.1305	.594
70-74 years	-.0231	.925
75-79 years	-.1182	.630
80-84 years	-.2145	.378
85 years & over	-.3186	.184
Sex:		
males	.1927	.429
females	.0986	.688
Marital Status:		

never married	.0643	.794
married	.1505	.539
separated	.3941	.095

table continues

Socio-demographic characteristics	r value	p value \leq
divorced	.1065	.664
widowed	.1344	.583
Housing Status:		
own	-.1267	.605
purchasing	-.1347	.582
Department of Housing rental	.4415	.058
other government rental	.3968	.093
private rental	.0697	.777
Highest Educational Qualification:		
higher degree	-.5748	.010*
postgraduate diploma	-.6540	.002*
bachelor degree	-.5622	.012*
undergraduate diploma	-.6228	.004*
associate diploma	-.4562	.050
skilled vocational	.2680	.267
basic vocational	-.3763	.112
not qualified	.7437	.000**
Employment:		
employed	-.1637	.503

unemployed	.6394	.003*
Occupation:		
managers	-.5977	.007*
professionals	-.6095	.006*
para-professionals	-.3309	.166
tradespersons	.5655	.012*
clerks	-.1158	.637

table continues

Socio-demographic characteristics	r value	p value ≤
sales & personal service workers	-.2114	.385
plant & machinery operators/drivers	.7133	.001**
labourers & related workers	.7197	.001**
Gross Annual Household Income:		
\$0-8K	.3962	.093
\$8-12K	.2207	.364
\$12-16K	.7596	.000**
\$16-20K	.6168	.005*
\$20-25K	.6250	.004*
\$25-30K	.5393	.017
\$30-35K	.4731	.041
\$35-40K	.3689	.120
\$40-50K	.3444	.149
\$50-60K	-.1936	.427
\$60-70K	-.4037	.087
\$70-80K	-.4792	.038
\$80-100K	-.5498	.015
\$100-120K	-.6358	.003*
\$120-150K	-.6542	.002*
\$150K & over	-.6020	.006*
Country of Birth:		
Australia	-.2395	.323
Canada	-.5433	.016

Ireland	-.1038	.672
New Zealand	-.2302	.343
South Africa	-.4518	.052

table continues

Socio-demographic characteristics	r value	p value \leq
United Kingdom	-.3582	.132
United States of America	-.4623	.046
China	.2457	.311
Germany	-.1261	.607
Greece	.5397	.017
Hong Kong	-.3443	.149
India	-.1236	.614
Italy	.2901	.228
Lebanon	.5929	.007*
Malaysia	-.0910	.711
Malta	.3109	.195
Netherlands	-.2479	.306
Philippines	.4384	.060
Poland	.3980	.091
USSR	.2085	.392
Vietnam	.4585	.048
Yugoslavia	.4840	.036
Other	.5194	.023

* $p \leq 0.01$ (p values were rounded to 2 decimal places to assess statistical significance at $p \leq 0.01$)

** $p \leq 0.001$

Table 3Original and Derived Variables from First Factor Analysis of Independent Variables Relating to Per Capita Poker Machine Expenditure

Original variable	Derived variable
Age:	
0-14 years, 15-19 years	0-19 years
20-24 years, 25-29 years, 30-34 years	20-34 years
35-39 years, 40-44 years	35-44 years
45-49 years, 50-54 years, 55-59 years	45-59 years
60-64 years, 65-69 years, 70-74 years	60-74 years
75-79 years, 80-84 years, 85 years & over	75 years & over
Sex:	
male	male
female	female
Marital Status:	
never married, separated, divorced	single
married, widowed	married/widowed
Housing Status:	
Department of Housing rental, other	rental
government rental, private rental	
own, purchasing	own/purchasing
Highest Educational Qualification:	
higher degree, postgraduate diploma, bachelor	tertiary
degree, undergraduate diploma	

associate diploma, skilled vocational, basic

vocational

vocational

not qualified

not qualified

table continues

Original variable	Derived variable
Employment Status:	
employed	employed
unemployed	unemployed
Occupation:	
managers, professionals, para-professionals, sales & personal service workers	white collar
tradespersons, clerks, plant & machinery operators/drivers, labourers & related workers	blue collar
Household Income:	
\$0-8K, \$8-12K, \$12-16K, \$16-20K, \$20-25K, \$25-30K, \$30-35K, \$35-40K	low income
\$40-50K, \$50-60K, \$60-70K	middle income
\$70-80K, \$80-100K, \$100-120K, \$120-150K, \$150K & over	high income
Country of Birth (COB):	
Canada, Ireland, New Zealand, United Kingdom, USA, South Africa	COB 1
Malta	COB 2
Australia, Germany, Netherlands	COB 3
Greece, Lebanon	COB 4
China, Italy, Vietnam, Yugoslavia	COB 5
Poland, USSR	COB 6

Hong Kong, Malaysia

COB 7

India, Philippines

COB 8

Table 4Original and Derived Variables from Second Factor Analysis of Independent VariablesRelating to Per Capita Poker Machine Expenditure

First derived variable	Final derived variable
not qualified, unemployed, COB 2, COB 4, COB 5, COB 8 (born in Malta, Greece, Lebanon, China, Italy, Vietnam, Yugoslavia, India, or Philippines)	lower class NESB
tertiary, white collar, high income, COB 1 (born in Canada, Ireland, New Zealand, United Kingdom, USA, or South Africa)	upper class ESB
COB 7 (born in Hong Kong or Malaysia)	Born in Hong Kong/Malaysia
COB 6 (born in Poland or USSR)	Born in Eastern European
married/widowed, own/purchasing, vocational, blue collar, medium income, employed, COB 3 (born in Australia, Germany or Netherlands)	middle class Australians
0-19 years, 45-59 years	children/teens/middle aged
20-34 years, single, rental, low income	young singles
35-44 years	younger middle aged
60-74 years, 75 years & over	elderly
male	male
female	female

Table 5Stepwise Regression Between Per Capita Poker Machine Expenditure and Final DerivedIndependent Variables

<u>Variable</u>	<u>B</u>	<u>SE B</u>	<u>Beta</u>	<u>Multiple R</u>	<u>R²</u>
lower class NESB	7.064470	1.516840	.748746	.74875	.56062
<u>F = 21.69100; df = 1; p ≤ .0002</u>					