

# **THE SOCIAL AND ECONOMIC IMPACTS OF GAMING: A FRAMEWORK FOR RESEARCH**

## **Project Report**

**2001**

*Prepared for*

**The Victorian Casino and Gaming Authority**  
Level 5/35 Spring Street  
Melbourne Victoria 3001

*Prepared by*

**The Social and Economic Research Centre**  
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Brisbane Queensland 4072

# **THE SOCIAL AND ECONOMIC IMPACTS OF GAMING: A FRAMEWORK FOR RESEARCH**

**A report for the  
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## The Social and Economic Research Centre (SERC)

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Emeritus Professor John Western is the Director of the Centre, and Professor John Mangan of the Economics Department is Executive Director. The Research Director is John Johnston.

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The Project Team would like to acknowledge the contribution of Alex Cody, Jenny Figueiredo, Suzanah Cassimaty, Kris Natalier, and Warren Keir who contributed to the project.

SERC was engaged by the Victorian Casino and Gaming Authority for this project. Following the establishment of the Gambling Research Panel under Part 9A of the Gaming Machine Control Act 1991 the Authority assigned its right under the Research Contract to the Panel. In accord with this the Report was presented to the Panel.

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## Executive Summary

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### Introduction

The project had two research objectives.

The first was the development of an analytical framework and associated indicators that would provide a model for the analysis and evaluation of the social and related economic impacts of gaming. The Terms of Reference called for the examination of gaming as opposed to gambling. Accordingly the emphasis is on Electronic Gaming Machines (EGMs) and casino activity although at times it has been necessary to draw on general gambling research. In developing the analytic framework attention was given to data collection, the multiple dimensions at which gaming impacts occur and the nature of the impacts at each level of data collection.

The second objective was to critically analyse and evaluate the research projects in the 1998-99 Research Program of the Victorian Casino and Gaming Authority (the Authority) using the analytical framework developed.

Following from these objectives the report:

- draws conclusions about the social and economic impacts of gaming;
- provides an analysis of the research conducted in the context of the framework.

**Background to the project.** A backdrop to the project was obtained from an examination of the Authority's Research Charter and Research Scoping Matrix. This provided a context to position the 1998-99 Research Program, which was the subject of the second research objective.

A sense of the growth and current magnitude of the gaming industry was formed from the collation of national and state statistics with an emphasis on machine gaming indicators such as the level of individual participation in gaming. Changes in gaming expenditure and government related revenue were also considered as these are important indicators at the macro level.

**Methodology and approach.** The methodology comprised six phases.

#### **Phase 1—Identification and collation of relevant data**

This involved examination of previous Authority research followed by a search for relevant material using electronic databases and the Internet.

Once identified this material served as the basis for a critical review of the existing gaming impact research.

## **Phase 2—Linking Levels of analysis and the impacts of gaming**

The review of the research enabled the identification of a set of units of analysis for which gaming impacts could be measured. The units identified were:

- the individual and family,
- community,
- region;
- state.

Each data source was categorised as relating to a unit of analysis. Seven dimensions of gaming impact were identified. These were:

- health and wellbeing;
- culture;
- recreation and tourism;
- employment and education;
- legal/justice;
- economic development;
- financial .

A two dimensional matrix (ie. Level of analysis x dimension of impact) containing 28 cells was then constructed to provide the impact framework.

## **Phase 3—Framework review**

The framework was subject to a of a comprehensive review. A discussion paper outlined the framework was prepared and sent to stakeholders who had been identified through discussion with the Authority, and written responses sought from them. In addition a similar discussion paper was forwarded to consultants, undertaking projects as part of the 1998-99 Research Program, again with a request for written comment.

Semi-structured interviews were held with key stake holders and gaming providers.

Adjustments were made, as necessary, to the framework following this consultation process.

#### **Phase 4—Summary and evaluation of the findings from individual projects**

Each of the reports from the 1998-99 Research Program was critically reviewed in terms of how its findings could be understood in the context of the framework.

#### **Phase 5—Consultant feedback**

A draft of the review of each project was sent to its author/s. and feedback sought. Based on their response amendments (where appropriate) were made.

#### **Phase 6—Integration and evaluation of the findings from the 1998-99 research program**

To finalise research objective 2 the output of Phase 5 was evaluated by:

- identifying and providing explanations for the convergence and divergence of findings within the framework;
- identifying cells that showed the need for further research.

#### **Literature review on the social and related impacts of gambling**

A survey of international and Australian literature focussing on the level of analysis and the dimension of impact contained in the model was undertaken.

#### **Analytical framework of the social impacts of gaming**

The process by which the framework components were identified and defined. Three existing models were examined.

1. Model 1 presented in *Summary of Findings 1996-97 Research Program* (Arthur Andersen, 1997).
2. Model 2 presented in *Annual Gambling Report 1997-98* (Alcohol and Gaming Authority, 1998).
3. Model 3 presented in *Australia's Gambling Industries* (Productivity Commission, 1999).

Following this examination the analytical framework foreshadowed in Phase 2 of Methodology and Approach and is represented by a two dimensional matrix containing 28 cells was presented. The levels of analysis are defined in Table 5.2 and Dimensions of Impact in Table 5.3.

Table 5.4 sets out the analytic framework and provides examples of the impacts that are characteristic of the individual cells defined by the intersection of the different combinations of two dimensions.

Section 5.3 provides an analysis, of each cell, focussing on:

- a brief description of the gaming impacts;
- indicators of these impacts;
- a discussion of the adequacy of indicators and availability of data.

A comprehensive view of the dynamics that are at play is provided while at the same time it is shown that reports of impacts are not available for all cells. The nature of the framework construction, the definitions used or simply lack of relevant research contribute to this fact.

### **Summary and evaluation of individual projects**

The analytical framework is used to summarise and evaluate the findings of each project in the 1998-99 Research Program.

#### **◆ Gaming—comparative history and analysis (Consultant: Australian Institute for Gambling Research)**

This report provides a comparative history of gambling in Australia. It focuses on the recent history of gambling in each jurisdiction and outlines the structure of specific gambling industries in these jurisdictions. In particular, the report contrasts patterns of gambling activities and attitudes in the different States, with specific reference to differences with Victorian positions.

The methodology for the project was based on: (1) consultations with relevant government representatives and community and industry bodies; and (2) analysis of secondary data. The secondary sources that were used included: (1) reports of the Victorian Casino and Gaming Authority and the Productivity Commission's *Australia's Gambling Industries Draft Report 1999*; (2) casino and gaming impact studies and relevant statistical series; (3) reviews of regulatory models of gambling; and (4) popular articles and books on gambling.

The report focuses heavily on the financial and economic dimensions of the gambling industry, and addresses the importance of the industry to the monetary situation of individuals, and to the development of State economies (including the industry's provision of employment opportunities). The report also emphasises the role of gaming in providing funds that are channelled into community benefits and services, either through market forces, or legislative requirements. Other social

implications of gaming are found in the presentation of motivations for gambling (eg. social interaction, relief from boredom and/or loneliness). Overall, the study focuses on the provision or prevention of material benefits, and there is less information on the cultural consequences and the legal or justice issues involved in gambling. This focus is appropriate given the Terms of Reference for the project.

A major limitation for this project was the absence of systematic, national research on gambling impacts—which led to a lack of complementary and coherent studies findings across States.

In sum, the report provides a broad overview of the histories and current patterns of gambling.

◆ **Sixth and seventh surveys of community gambling patterns and perceptions (Consultant: Roy Morgan Research)**

The purpose of the *Sixth and Seventh Surveys of Community Gambling Patterns and Perceptions* was to continue to collect data and compare the findings of the latest surveys with those of earlier periods.

The sixth and seventh waves of the Community Gambling Patterns and Perceptions Survey provide insight into the gambling patterns of adult Victorians, and in particular the frequency and duration of visits to licensed gaming venues and to the Melbourne Crown Casino. In addition, the surveys sought to identify the clientele using the various forms of gambling, reasons for visiting gambling outlets, the level of expenditure per gambling activity based on household and individual income, the proportion of people who are gamblers, and the incidence of problem gamblers (based on the South Oaks Gambling Screen criteria). The positive and negative perceptions and attitudes of the community towards gambling were also considered.

The seventh survey was administered via Computer-Assisted Telephone Interviewing (CATI) facilities. Multilingual interviewers were used to conduct interviews in languages other than English to ensure that no particular groups were excluded from the survey. As in recent previous waves of the Community Gambling Patterns and Perceptions survey series, Geospend (a division of Australia Post) provided the population sample. Geospend generated a random sample from an electronic version of the White Pages. A total of 58 quotas were assigned to the sampling frame, representing geo-demographic segments of the Victorian population previously identified by Geospend. A total of 1,760 interviews were conducted, covering both metropolitan (1,256) and rural (504) areas. In order to project the result to the Victorian population, the results were weighted by age, sex and country/metropolitan areas, according to the latest available ABS Census data.

The gambling community was segmented according to gambling behaviour and attitudes in 1995, with five segments identified and replicated in the 1996, 1997, 1998 and 1999 surveys. The identified characteristics of the individuals belonging to each segment were: disinterested gamblers; occasional gamblers; social gamblers; acknowledged heavy gamblers; and committed heavy gamblers.

Limitations of the research included: (1) a lack of comparability across the survey series due to changes in question wording, changes in sample design, and differences in the treatment of “outliers”; and (2) concerns over the efficacy of using the South Oaks Gambling Screen (SOGS) in an Australian context.

Overall, the Sixth and Seventh Surveys make a significant contribution to current knowledge on the patterns of gambling in Victorian. The authors of the Seventh Survey (1999) claim that, patterns of gambling behaviour for Victorians as a whole, appear to be showing signs of stabilising. This stabilisation has occurred since the introduction of EGMs in 1992 and the opening of the temporary Crown Casino in June 1994, followed by the opening of the permanent Crown Entertainment Complex in May 1997. After a marked shift in a positive direction in 1998, people’s opinions on the impacts and role of gambling became more negative in 1999—although still generally less negative than in the preceding two years. Overall, the level of participation in gambling activities has increased in the past year. There are fewer people participating in EGM and in casino gambling, but those that do participate tend to play more often and spend more money each time they play. Actual gambling expenditure (the amount lost) increased overall by 8.11 per cent, with most of this attributable to increased expenditure on EGM gambling. The expenditure on more established forms of gambling, like racing and lotto-type games, has remained relatively constant.

◆ **The economic impact of gambling (Consultant: National Institute of Economic and Industry Research)**

This study required the collection, analysis and interpretation of relevant data from various sources. Aims of the project included:

- An assessment of the economic impacts of gaming based on the State, regional or geographical area, community or local government area, and household/individual levels of analysis. Analysis of the economic impacts at these levels and consideration of the income, expenditure and employment aspects of the gaming industry (in relation to other industries) was also required.
- An assessment of: (1) the linkages between each of the specified levels of analysis; (2) an examination of the historical relationship of gambling expenditure in comparison to overall expenditure; and (3) how the relationship between gambling expenditure and overall expenditure has changed since the introduction of electronic gaming machines in Victoria and the opening of the Melbourne Casino.
- An examination of the level of expenditure on gambling compared to that in other Australian states and territories (taking the differences in industry structure into account).
- The identification of significant changes in the nature of expenditure patterns (both gambling and non-gambling) at the individual/household level.
- The investigation of the relationship of these changes to such variables as employment, income, education, household composition and other demographic characteristics.

The project was also expected to produce an overview of econometric modelling techniques used in the economic assessment, including the selection of the appropriate model; the selection of the data required for utilisation of the model; and

the use of sensitivity analysis to test the model results. The project was also to overview micro-simulation techniques used in the economic assessment, including the identification of the variables used and the combination of variables used, (eg. income, employment type and status, and education); and elasticity of variables analysed. Finally, the researchers were to compare the findings of other economic impact studies undertaken by the Authority, including *The Impact of the Expansion in Gaming on the Victorian Retail Sector* and *The Impact of Gambling on Employment in Victoria*.

Eight tasks formed the methodology for this project: (1) improving the micro-simulation database; (2) development of a dynamic micro-simulation approach to the introduction of increased gambling facilities; (3) development of a micro-simulation comparative analysis of Victoria and New South Wales; (4) updating of the macroeconomic indicator analysis of the researchers' previous studies; (5) updating of the venue survey; (6) development of regional econometric models; (7) estimation of the State-wide economic impacts of gambling; and (8) collation of all previous results.

A key problem encountered in this research was the limited usefulness of existing data sets for micro-simulation purposes. For example, the researchers found that most recent surveys, including data collected by the Authority, were developed to gather social and psychometric data—and were less suited for econometric purposes.

This report makes a significant contribution to the debate and understanding of the economic impacts of gambling. Part of this contribution is the extension of the “savings hypothesis” to include future trends and consideration of the differential impact on various households and regions. A view is taken of the gambling industry as a maturing one and consideration is given to the implications of this as opposed to the impacts of the introduction of new forms of gambling. The researchers found that up to 1995-1996 new gaming expenditure had a positive impact through: (1) a reduction in household savings; and (2) the level of unemployed resources that were available at the time of introduction. It was argued that retail expenditure was not significantly affected. An important caveat was offered that:

“While at the State level there is little evidence to suggest that increases in gambling expenditure adversely affected the retail industry generally, on a geographical basis some areas and industries in Melbourne and Victoria have probably been affected.” (National Institute for Economic and Industry Research, 1997a, p. ii)

The analysis demonstrates the dynamic nature of the “savings hypothesis” which suggests that in Victoria its strength declined by 10 per cent in 1997-8 and with rising interest rates is expected to decline by 30 per cent in 2000–1. By 2004-5 the level of gambling financed out of savings is expected to be reduced by half compared to 1995-6. However, because of the maturing of the industry and the removal of the constraint on the use of tax revenue for government expenditure, there will be further increases in the content of gambling activity in Victorian economic activity.

The report identifies two separate social cost outcomes. The first is the cost to asset accumulation and regional income disparity and the second is the social costs of problem gambling usually related to the individual and family. The authors argue that even with generous allowance for the cost of problem gambling in Victoria in 1992–1998, expenditure on gambling brought substantial economic benefits. The household impact varied with significant gains to those who did not gamble but obtained employment. Other households with problem gambling members suffered considerably, particularly where they were in low-income groups.

A key finding is that the economic impact of the increase in gambling varied significantly across the state. The impact varied with:

“the chief differential distribution of benefits was from asset income, and hence wealthy areas tended to benefit. By contrast given the relationship between problem gambling and low incomes and wealth, low income areas tended to suffer net disbenefits.” (p. 93)

The authors argue that the major outcome of the “savings hypothesis” is that there will be a run down in the asset base. A turning point will occur when households start to rebuild savings. This is likely to lead to a change in expenditure patterns. The point made in the report is that the direction of that change is unknown.

◆ **Hotel and club industry gaming impact study (Consultant: Market Solutions Australia Pty Ltd)**

This report presents the findings of the *Hotel and Club Industry Gaming Impact Study*. The broad objective of the project was to understand the impact of the introduction of electronic gaming machines (EGMs) on the hotel and club industry. This project was intended to retain comparability with the report *Community Facilities Resulting from the Providers of Gaming in Victoria* (Hames Sharley Victoria, 1997) whilst being extended to include comparisons with non-gaming hotels and clubs. The project also aimed to address additional objectives relating to the impact of EGMs on related industries, in particular, the music and entertainment industry and on other suppliers to hotels and clubs.

The initial stage of the research program comprised a qualitative investigation including a literature search, focus groups amongst venue patrons and in-depth telephone interviews with managers, entertainers/agents, restaurants, suppliers and community organisations. The results of the preliminary stage were used as background information in designing questionnaires for the quantitative surveys. The second stage of the research project incorporated five separate quantitative studies—comprising surveys with venue managers, patrons, entertainers/agents, beneficiaries of contributions and suppliers to the hotel and club industry.

The Terms of Reference of this project required that the study maintain comparability with the earlier study *Community Facilities Resulting from the Providers of Gaming in Victoria* (Hames Sharley Victoria, 1997a), while comparing the impact on the Victorian hotel and club industry of the introduction of EGMs. However, the final

report contains little comparison with earlier research and therefore offers limited opportunities for longitudinal analysis.

The authors of the report note some statistical limitations in comparing figures across years due to changes in the calculation and reporting procedures for these figures (eg. State Government gaming revenue as a proportion of total revenue). This limitation is often encountered in studies requiring comparisons across time.

This report is concerned with contrasting the reported positive and negative impacts of the introduction of EGMs to gaming venues (in comparison with non-gaming venues) within the hotel and club industry. Within this framework, the study mainly addresses the impact of EGMs on the financial, economic development, and recreation/tourism dimensions of the hotel and club industry and related industries (eg. music and entertainment). However, there is also some discussion of the health and wellbeing and employment impacts of the introduction of EGMs to the hotel and club industry and related industries (eg. music and entertainment). The positive and negative impacts are dealt with largely at the community level. Although there is some discussion regarding impacts at the individual and regional levels (eg. country versus city).

The extent of the impacts on live entertainment remain unclear. There is perhaps an under-emphasis on the decline in employment opportunities for live entertainers at non-gaming venues. This requires further research.

The extent of improvements to community facilities from the Community Benefit Fund (CBF) are not entirely clear. Many of the noted facility improvements were concentrated in urban areas. It is unclear to what extent these improvements extended to communities in regional areas of Victoria and whether the funds flowing to the CBF from the regions are equitably redistributed back to those regions.

In summary, the report makes an important contribution to our understanding of the financial, economic development, and recreation and tourism impacts of the introduction of EGMs in the hotel and club industry (and related industries) in Victoria.

◆ **The impact of the expansion of gaming on the tourism, entertainment and leisure industries (Consultant: Australian Institute for Gambling Research, School of Leisure, Sport and Tourism, and Department of Hospitality, Tourism and Leisure)**

The primary aim of this project was to examine the impact of the expansion of gaming on the tourism, entertainment and leisure industries following the introduction of EGMs in Victoria in July 1992, and the opening of the Crown Casino in 1994. The report commences this task with a historical review of tourism, entertainment and leisure trade turnover, population and household income figures from all Australian jurisdictions since 1990. The report then attempts to analyse all of the relevant factors (particularly the introduction of EGMs and casinos), which may have had an effect on tourism, entertainment and leisure trade turnover figures in Australia with a specific focus on Victoria. Next, the report aimed to review the expenditure of adult Victorians from their discretionary disposable income, before and after the introduction of gaming, and compares these trends in other States. Trends in tourism, entertainment and leisure purchases (made by adult Victorians and interstate and international visitors) are also identified. The report constructs a profile of the current nature of tourism, entertainment and leisure activity in Victoria

following the introduction of EGMs and the Casino, and overviews the international experience of the effect of gambling on these industries.

In general, the research methodology was concerned with drawing out the complex relationships between the establishment of the Melbourne Casino, the introduction of EGMs to clubs and hotels, and tourism, entertainment and leisure activity in Victoria.

At the micro-level, representatives of key stakeholder organisations or enterprises were identified and recruited. In the stakeholder sample, representatives spoke for gaming venue businesses, commercial associations, unions, community organisations and peak industry bodies. No primary data were collected from consumers at the individual or household level, rather analyses of pre-existing secondary data were undertaken. Discussion of the impacts of the expansion of gaming on tourism, entertainment and leisure was organised according to the four levels of analysis (ie., individuals and families, communities, regional, and State) in the SERC analytical framework (see Section 5.2 of this report).

The first set of resources for secondary analysis were previous reports commissioned by the Authority. In particular, the report *The Impact of the Expansion in Gaming on the Victorian Retail Sector* (National Institute of Economic and Industry Research, 1997a) was used as a model for some aspects of the study. Statistical data on household consumption spending was also drawn from this report. Other interim findings were used from *The Economic Impact of Gambling* (National Institute of Economic and Industry Research, 2000) and the *Hotel and Club Industry Gaming Impact Study* (Maddern & Malkiewicz, 1999). Data relating to the distribution of EGMs in Victoria was drawn from the Authority's Baseline Database project.

Various socio-demographic data sets developed by the Australian Bureau of Statistics were also used in preparing population and recreation overviews, and a literature review of published papers provided background themes and perspective's to help in framing the primary research.

Primary data collection focussed on a process of consultation with key regional bodies, industry groups and individuals. Interviews were conducted with key stakeholders in the tourism, entertainment and leisure sectors, and proprietors and managers of gaming and non-gaming hotel and club venues (along with observation of venues). In addition, a targeted survey was undertaken with country tourism promoters and operators.

The report documents four methodological limitations that need to be considered when interpreting the findings. The first relates to trend analysis and that despite the availability of data which enable the comparison of time-use patterns with gambling expenditure patterns, the comparisons are of limited use. The second limitation relates to the phenomenon of variation between regions in the flow of social and economic impacts due to the variation in pre-conditions between different regions prior to the introduction of EGMs. A related limitation involves the problem associated with measuring the economic turnover of tourism. In terms of Australia's national economic data collections, tourism is not specified as an industry or sector within the national economic accounting structure, but rather as a flow of funds between sectors. Consequently, while tourism is valued at a general national level,

the non-uniformity of demand for tourist attributes which vary from place to place, mean there is little information that can actually be drawn from this data in terms of value of tourism to specific regions or locations within the country.

The fourth limitation relates to the confounding effect of external impacts when determining the performance of specific economic sectors. Changes in economic conditions in another country or region are likely to have a direct impact on the demand for inbound tourism to Australia, and this would be reflected in aggregate trend data. However, if this trend data is read in conjunction with data relating to the expansion of gaming, a correlation between gambling expenditure and tourist activity may be inferred even though the artefact of correlation may largely be a result of the external impact. Consequently, the authors admit that where the impact of such externality is assumed, it remains extremely difficult to unravel changes in indicators or performance which are related to externalities from other changes internal to the sector under examination.

Overall the report contributes significantly to our understanding of the positive impacts of the expansion of gaming on the tourism, entertainment and leisure industries. The report maps these positive impacts principally through the identification of changes in economic development at the regional and State levels and changes in recreation and tourism activity at the community, regional and State levels.

The report demonstrates that the redistributive impacts identified have both positive and negative impacts—but often for different groups. Negative and positive impacts can be redistributive in nature for certain regions, consumers, and operators. For example, the impacts of the Crown Casino on tourism, has an impact on certain Ballarat operators.

The report employs a robust methodology, however the findings are constrained by the tendency of localised impacts to be concealed within analyses that focus on aggregate level data. In particular, a lack of in-depth community level information and comparative regional social and economic impacts, restricts the extent of the researchers' claims.

◆ **Longitudinal examination of perceptions and their relationship with actual findings (Consultant: Marketing Science Centre)**

This study was designed to develop a better understanding of public perceptions of the gaming industry and those who participate in it. In particular, the study focuses on the relationship between people's perceptions and their own gambling practices. It was hoped that such a focus would make sense of tensions between people's own practices and perceptions of gaming, and their understanding of the larger community's involvement in gaming activities. The project is unique in its longitudinal, rather than cross-sectional, focus and attempt to understand observed discrepancies between consumers' gambling patterns and perceptions of gambling.

This study is the first panel in a longitudinal research project, and the researchers are hoping to trace the effectiveness of information programs in "aligning public

views with actual behaviour” and test the direction of causality between behavior and perceptions. In addition, the researchers are seeking to trace, at the individual and aggregate levels, changes in behavior, attitudes and knowledge with respect to gambling in Victoria, and the variables associated with those changes. Other specific issues for further research included changes in the accuracy of knowledge of the industry.

The study draws on existing written and taped work to provide the original framework for four focus group interviews. Focus group participants were recruited from the White Pages, from suburbs lying in easy travelling distance from the location of the focus group interviews. The constitution of the focus groups was organised with reference to age, frequency of gambling, attitudes to gambling, and the gambling industry.

These focus groups were used to develop a quantitative instrument. The instrument was constructed with reference to a list of topics in which people held differing opinions and practices. The focus groups also suggested the degree to which people would be able to answer questions in detail over the phone, and the most relevant set of answers.

The survey interviews were conducted from 5th to the 13th October 1999. Randomly selected respondents (N = 1024) were interviewed over the telephone using a 23 minute questionnaire. Gambling industry employees were included in this questionnaire, in an effort to test the hypothesis that direct involvement in the gambling industry was associated with greater knowledge of that industry, and with higher gambling participation. Recruitment from this telephone survey to the longitudinal study took place at the end of the survey, with an 85 per cent recruitment rate. Those who refused to take part in the longitudinal study were more likely to be non-gamblers, and were less likely to know about the gambling industry.

The aims and focus of this report mean that the findings lie substantially outside of the SERC framework. The report emphasises people’s perceptions of the gaming industry, and is part of a project that will track changes in these perceptions and behaviours over time. Thus, it cannot directly address actual outcomes on any of the levels or in any of the dimensions indicated within the SERC framework. The emphasis on sources of information about the gambling industry also lies outside the focus of the literature review currently being undertaken. The following issues were addressed by the report and cannot be incorporated into the SERC framework:

- the accuracy of respondents’ knowledge of the industry, including its regulation by the Government, the extent of the population’s gambling practices, the skill levels necessary for successful gambling practices;
- the extent of respondents’ own gambling activities;
- respondents’ media use habits and the importance of different media as sources of information on gambling-related issues; and
- respondents’ expectations about changing gaming patterns over the next year.

The survey and report addressed people’s perceptions of some issues that lie within the SERC framework. Here the focus on perceptions must be emphasised. The

following issues have been positioned within the SERC framework, but are discussed with reference to respondents' perceptions, rather than actual outcomes:

- the gambling industry's provision of places of entertainment or pleasure (positive health and wellbeing impacts at the individual and family level of analysis);
- motivations for other people's gambling (positive recreation impacts at the individual and family level of analysis);
- the existence of problem gamblers (negative health and wellbeing impacts at the individual level of analysis);
- the industry's beneficial contribution to the economy (positive economic impacts at the State level of analysis); and
- the degree to which the social problems of gambling outweigh the benefits (negative health and wellbeing impacts, at no specified level of analysis).

Few of the questions reflect actual outcomes associated with the gaming industry. Two foci that fit within the framework are:

- pleasures of gambling; and
- motivations for gambling.

Findings from these questions show that gambling can contribute to positive recreation impacts at the individual and family level. This is the only level of analysis and dimension of impact that is directly reflected in the survey questions and findings. Thus, the study has little to offer with reference to health and wellbeing, employment and education, legal/justice, economic development or financial impacts, at any level of analysis.

In conclusion, the report contributes to our understanding of how people see the gaming industry, and the sources from which their knowledge flows. It does not aim to contribute to our understanding of the outcomes of gambling (and the findings do not do so).

◆ **The impact of gaming on specific cultural groups (Consultant: Cultural Patterns Australia, Thomas & Associates, and the Australian Multicultural Foundation)**

This project investigates the impact of gaming on specific cultural groups in Victoria. The project consisted of two stages. The aims of Stage 1 were:

- To identify major cultural groups for whom patterns of gambling behaviour, attitudes towards gambling and impacts of gambling might be significantly different to others and who could perhaps be the subject of study.
- To consider a range of culturally related dimensions including ethnicity, nationality, religion and language.
- To review the existing information sources including previous research carried out by the Authority, its existing databases and other relevant material.

- To identify the problems involved in collecting accurate representative data, both qualitative and quantitative, and suggest possible methods of addressing these problems.
- To conduct interviews with prominent community opinion leaders of the various communities to establish avenues for data collection and provide background information.
- To select three specific cultural groups for detailed investigation in Stage 2.

The aim of Stage 2 of the project was to conduct a detailed investigation of the specific cultural groups identified in Stage 1. This investigation was to include the identification of: patterns of gambling behaviour; attitudes and beliefs towards gambling including cultural influences and values; and the extent and nature of the social and economic impacts, both positive and negative. The objective of this detailed investigation was to determine the actual behaviour, attitudes and impacts of gambling, and compare these to those of the Victorian population as a whole.

In order to achieve the goals in Stage 1, the researchers developed a program of inter-related activities including: a literature review of available published research and documents; the administration of a wide ranging set of consultations with key informants representing Victorian cultural groups; and an analysis of data from the Australian Bureau of Statistics, the Authority's Community Gambling Patterns and Perceptions Surveys, and the Break Even Problem Gambling Services Minimum Data Set.

The researchers applied three different selection models (ie. population prevalence, prevalence of gambling participation, and rates of problem gambling), to inform Stage 2 decisions and the recommendations. The selection process was also informed by consultations (regarding gambling in Victoria) with sixty groups and individuals from fourteen ethnic communities. The researchers recommended that the three specific cultural groups for inclusion in Stage 2 of the project be: Chinese speakers; Vietnamese, and Greeks. The researchers' recommendation was based on the principle of desirability of including groups that are numerically strong within the Victorian population and that come from a cross section of European and Asian cultural groups and reflect different historical periods of immigration. The Research Committee of the Authority also recommended that the researchers expand the study in order to include Arabic speakers as a comparison group, due to their low rates of participation in gambling as a result of cultural/religious factors.

Measurement of the participation and experiences of survey participants in gambling activities was drawn from the questionnaires used in the Authority's *Survey of Community Gambling Patterns and Perceptions* series. This enabled the direct comparison of outcomes from this study and the previous VCGA studies on key parameters.

Two-thirds of the Stage 2 interviews were conducted in early weeknight evenings with the balance equally distributed between weekends and during the day. The majority of the interviews were by telephone but with a proportion face-to-face if this was requested. In the pilot stage of the questionnaire, 20 face-to-face interviews (5 for each language group) were conducted. It was intended that six hundred participants (150 in each language group) would be interviewed using Computer Assisted Telephone Interview (CATI) procedures. Of these, 10 per cent (60 total, 15 in each language group) participated in face-to-face follow-up interviews. The final achieved samples were 664 for the initial interviews and 42 for the follow-up interviews.

A key limitation of the study was the use of the South Oaks Gambling Screen (SOGS) to assess problem gambling. As noted by the authors of the report, there are concerns over the reliability of the SOGS when used with non-clinical populations and outside of the United States.

Notwithstanding the issues relating to the SOGS, the report does make a significant contribution to the body of knowledge on the positive impacts of gaming upon the health and wellbeing and recreational and tourism benefits flowing to members of the different cultural groups. Most of those comprising the cultural communities represented by the respondents, corporately participate in gambling less frequently than the rest of the community and tend to use the venues for socialisation opportunities rather than gambling exclusively. However, the report also clearly identifies some of the negative health and wellbeing and financial costs of gaming affecting these same communities. Those from these groups that do engage in gambling, report disproportionate levels of gambling problems leading to expenditure of non-disposable income and psychosocial ill health resulting from stigmatisation due to cultural shaming practices.

◆ **The impact of gaming and crime statistics (Consultant: Centre for Criminology and Criminal Justice)**

The aim of this project was to undertake an assessment of the collection and evaluation of statistics of crime-related offences associated with the gambling behaviour of individuals—in light of the insufficient statistical information available on possible links between gambling and crime. The project focused on the collection of data relating to crimes committed by individuals as a consequence of their gambling. This involved the tracking of offenders through the various records held by those entities who deal with offenders. The three primary sources of information for crime statistics were identified as the Victorian Police, the Courts, and Correctional Services.

The project aimed to evaluate the availability of crime statistics to enable a meaningful analysis of the association between gambling and crime by: identifying the categories for which data is to be collected; examining and assessing existing data availability; and submitting a report to the Authority detailing the availability and quality of the data from the various sources.

In Stage 2 of the project the researchers were to: collect data where available for the past few years - 1995, 1996, and 1997 (and where practicable back to 1992) and for the current year 1998; recommend appropriate future data generation, collection and analysis procedures; and submit a report to the Authority detailing the impact gaming has had on crime statistics and procedures for future data collection.

The scope of the project was limited with the primary aim being to identify, collect and evaluate statistics of criminal offences associated with gambling behaviour. The sources of crime statistics were determined to be the three major components of the Criminal Justice System in Victoria: the Police, Courts and Correctional Services. The Victorian Police agreed to arrange for a focus group discussion with relevant staff, including statisticians responsible for analysis of Law Enforcement Assistance Program (LEAP) data, practitioners in the field, investigators, prosecutors and

research and planning staff. The Victorian Police also provided information on LEAP and approved any reproduction of relevant forms. The Department of Justice facilitated access to Court and Correctional staff and information data bases held by the Department.

The Authority provided details of problem gambler support agencies and also of the gambling industry. In collaboration with the Authority and after an initial examination of research relating to the commission of criminal offences by problem gamblers, five research questions were identified. Agencies and key people to be approached and consulted were identified and contacted. The first research question related to the extent of gambling-related crime and, in particular, the extent to which crimes are attributable to problem gamblers. The major data sources identified and perused were research studies, consultation with problem gambler support agencies and gambling industry representatives.

The second research question related to determining the characteristics of criminal offences committed by problem gamblers, and utilised sources of information similar to those necessary for the first research question. The third research question was directed at an analysis of law enforcement policies and procedures. Information as to how and to what extent gambling-related crime is monitored, addressed operationally and recorded in official statistics, was sought from the Victorian Police. Data was also obtained from national and overseas research.

Other focus group discussions also included representatives of the Victorian Police, who capture and record data relevant to the third research question. Senior police management commented on force policies and practices. Prosecutors provided current information about relevant court procedures. Crime statistics and police research personnel explained and detailed LEAP processes. Members of the Major Fraud Squad, the Casino Squad, Gaming and Vice Squad, and informants in prosecutions shared their knowledge of gambling-related crime in its many forms. Community policing staff provided information about the social consequences of problem gambling including family violence.

The fourth research question relating to the Courts sought to determine the extent to which gambling-related offences are known and officially recorded by the Courts. The data sources identified were the various administrative areas within the Courts. Research conducted nationally and overseas was also reviewed. Discussions with senior court administrators within the Department of Justice, stipendiary magistrates, the Director of Public Prosecutions, Court Registrars, Victims Referral and Assistance Service, the Public Advocate and Legal Aid were conducted. Court statistics and transcripts were also perused.

The fifth research question directed at correctional services sought to ascertain to what extent correctional officials were aware of gambling-related offenders undergoing sentences or placed on Community Based Orders (CBOs) supervised by Corrections and how these are recorded. Data sources held by corrections and relevant research studies both nationally and internationally were reviewed. Comprehensive analysis of this data required input from Corrections senior management, community corrections staff and the adult parole board. An

examination of correctional databases and a review of specific research projects were also undertaken.

Following the determination of methodological concepts, a literature survey of both national and international research projects was undertaken. Definitions of gambling-related crime and of problem gambling were formulated for use in discussions with the three criminal justice areas, welfare agencies and industry representatives. Having established definitions of terms, these were used in discussions with stakeholders and others who were consulted. International and national research projects were reviewed to ascertain the degree to which certain types of offending had been recorded in official statistics. The research was designed to determine what evidence existed to relate the commission of crime to gambling. The evidence examined ranged from anecdotal reports to that obtained from analysis of official statistics. The latter were obtained from the Victorian Police, the Department of Justice, Corrections and from a perusal of national and international research. The definition of gambling-related crime and the characteristics of offenders were discussed with spokespersons from welfare groups and the gambling industry to determine whether any other areas within and outside the criminal justice system record the type of information being sought.

The consultants ultimately were only able to report anecdotal evidence toward the negative legal/justice impacts of gambling on individuals and families in Victoria, due to the fact that official statistics currently collected in the three major areas of the criminal justice system cannot be used to identify crimes as gambling-related. The consultants also found that there is no systemic recording by the Police, Courts or Correctional Services of the reasons individuals commit a crime, hence there is no way of determining the extent to which a crime is gambling-related. As a consequence, the research project was not able to progress to its intended second stage of investigating available records in order to analyse the link between gambling and crime. Given this, the consultants recommended that the Authority discuss with the Police, Courts and Correctional Services the possibility of undertaking pilot projects to collect relevant gambling-related crime statistics.

#### ◆ **Longitudinal community impact study (Consultant: KPMG Management Consulting)**

The aims of this study were to:

- Describe changes in the economic and social conditions of six Victorian regions in the period 1992 until the present. The following issues were considered: (1) changes in the demographic profile of the regions; (2) employment; (3) changes in the gaming industries in each region; (4) changes in the availability and use of community services; and (5) changes in the existence of entertainment, cultural, sporting and shopping facilities.
- Identify the existence and changing nature of social and economic problems in the regions, and identify any relationship between these problems and changes in gambling opportunities in the region. In this analysis, commonalities and differences between the communities were identified.
- Identify general and community-specific benefits of the gambling industries.
- Identify the different effects of the introduction of casinos and electronic gaming machines on the lifestyles of particular segments of the population. This includes a consideration of the following: (1) changes in consumer preferences; (2) cultural, sporting, entertainment and shopping activities; (3) socio-economic and demographic position of people who frequent gaming venues; (4) any changes in the availability of community services, and people's demands on those services; and (5) changes in community organisations.

- Describe different patterns of gaming activities so that different impacts of specific gaming venues can be identified. This includes identifying different patterns of movement to and from the region in order to participate in different gambling activities.
- Compare differences between the findings of this report and the Authority's *Community Gambling Patterns and Perceptions* survey series;
- Linking the socio-economic profile of an area with the data collected.
- Identify the issues suggested by the research and findings.

Specifically, this report examines gambling practices in the following regions: Greater Dandenong; Greater Geelong; Maribyrnong; Mildura; Moreland; and Wellington. These regions were chosen as research sites because they shared similarities to allow for generalisation of findings, while also evidencing differences that would allow the researchers to analyse any local differences.

There were five stages in the methodology.

1. Establishing the context. This involved constructing regional socio-economic profiles by drawing on Australian Bureau of Statistics data. In addition, detailed gaming industry data was collected.
2. Consultation. The researchers met with local government representatives so that stakeholders could be identified. The researchers developed an issues paper from those discussions, and then held interviews with stakeholders (gaming and non-gaming venues, community support agencies, and other organisations and the local government), and public meetings at which community members could express their views (p. 10). These consultations helped to identify the issues that required further investigation in the resident's survey. They also generated information on people's perceptions of gambling in the areas.
3. Survey of community attitudes. The survey was administered to 1000 residents (consisting of a little under 170 residents from each region, and drawn from local government areas that complemented ABS Statistical Local Areas) by telephone. The survey instrument was developed after a review of existing data, previous surveys and community consultations. The survey was to identify:
  - The problems people perceived in their areas, and the similarities and differences in those perceptions across regions.
  - Changes in consumption and lifestyle patterns, including changes in: (1) general wellbeing; (2) entertainment, sport, cultural and shopping patterns; (3) demands for services and amenities; and (4) the use of community organisations.
  - Preferences for particular types of gaming.
  - Socio-economic and demographic characteristics of gaming venue patrons.

4. Econometric study. This study was conducted in order to explore factors associated with the variation in gambling expenditure over time and between regions. The significance of the following factors was explored: number of electronic gaming machines and venues, tourism expenditure, consumer attitudes and social security dependence.
5. Reporting.

The report suggests that a great deal of the data generated reflects community perceptions of the outcomes of gambling, rather than its actual outcomes. The Terms of Reference of this study lead to little information being generated at the State level of analysis. The reporting of the data rendered distinctions difficult to draw between the community and regional levels of analysis. Much of the data and analysis focussing on the relative significance of factors in the growth of gambling and its impacts was outside of the SERC framework (eg. use of perception measures). Many of these analyses addressed relationships between changes in practices and opportunities for gambling, and changes in general regional characteristics, rather than outcomes of gambling *per se*. Much of the analysis of factors contributing to the growth of spending on gambling and the study of relationships between individual's perceptions and activities cannot be discussed in terms of the outcomes of gambling. Similarly, changes in gambling practices and regional characteristics were not related to the outcomes of gambling.

Table E1

### Analytical Framework of the Social Impacts of Gaming x Projects in the Victorian Casinos and Gaming Authority's 1998-99 Research Program

	Level of Analysis			
<i>Dimension of Impact</i>	<i>Individuals and Families</i>	<i>Communities</i>	<i>Regions</i>	<i>State</i>
Health and Wellbeing	<i>Positive impacts:</i> Projects 1, 2, 3, 6, and 9 <i>Negative impacts:</i> Projects 1, 2, 6, 7, and 9	<i>Positive impacts:</i> Projects 1, 2, 4, 7, and 9 <i>Negative impacts:</i> Projects 1, 2, 6, 7, and 9	<i>Positive impacts:</i> Project 9 <i>Negative impacts:</i> Projects 3, 6, and 9	<i>Positive impacts:</i> Project 9 <i>Negative impacts:</i> Projects 6 and 9
Culture	<i>Positive impacts:</i> Projects 7 and 9 <i>Negative impacts:</i> Project 7	<i>Positive impacts:</i> Projects 1, 2, 4, and 9 <i>Negative impacts:</i> Projects 2 and 9		
Recreation and Tourism	<i>Positive impacts:</i> Projects 1, 2, 6, and 9 <i>Negative impacts:</i> Project 2	<i>Positive impacts:</i> Projects 1, 4, 5, 7, and 9 <i>Negative impacts:</i> Projects 1, 4, 5, and 9	<i>Positive impacts:</i> Project 4, 5, and 9 <i>Negative impacts:</i> Project 5	<i>Positive impacts:</i> Project 5
Employment and Education	<i>Positive impacts:</i> Projects 1 and 9 <i>Negative impacts:</i> Project 9	<i>Positive impacts:</i> Project 2, 4, and 9 <i>Negative impacts:</i> Project 9	<i>Positive impacts:</i> Projects 3 and 9 <b>Negative impacts</b> Projects 5 and 9	<i>Positive impacts:</i> Projects 1 and 3
Legal/Justice	<i>Negative impacts:</i> Project 8 and 9	<i>Negative impacts:</i> Project 9	<i>Negative impacts:</i> Project 9	
Economic Development	<i>Positive impacts:</i> Project 4	<i>Positive impacts:</i> Projects 1, 4 and 9 <i>Negative impacts:</i> Project 9	<i>Positive impacts:</i> Projects 3, 5, and 9	<i>Positive impacts:</i> Projects 1, 5, and 9 <i>Negative impacts:</i> Project 6
Financial	<i>Positive impacts:</i> Projects 1, 2, 9 <i>Negative impacts:</i> Projects 1, 2, 3, 7, and 9	<i>Positive impacts:</i> Projects 1 and 4		<i>Positive impacts:</i> Projects 2, 3, and 9 <i>Negative impacts:</i> Project 7

**Note:** Project 1-Gaming-comparative history and analysis (Consultant: Australian Institute for Gambling Research); Project 2-Sixth and seventh surveys of community gambling patterns and perceptions (Consultant: Roy Morgan Research); Project 3- The economic impact of gambling (Consultant: National Institute of Economic and Industry Research); Project 4- Hotel and club industry gaming impact study (Consultant: Market Solutions Australia Pty Ltd); Project 5- The impact of the expansion of gaming on the tourism, entertainment and leisure industries (Consultant: Australian Institute for Gambling Research, School of Leisure, Sport and Tourism, and Department of Hospitality, Tourism and Leisure); Project 6- Longitudinal examination of perceptions and their relationship with actual findings (Consultant: Marketing Science Centre); Project 7- The impact of gaming on specific cultural groups (Consultant: Cultural Patterns Australia, Thomas & Associates, and the Australian Multicultural Foundation); Project 8- The impact of gaming and crime statistics (Consultant: Centre for Criminology and Criminal Justice); Project 9- Longitudinal community impact study (Consultant: KPMG Management Consulting).

## **Summary and evaluation of the Victorian Casino and Gaming Authority's 1998-99 Research Program**

An intergration of the findings of the 1998-1999 research program is provided in Table 1 which locates the separate projects in the relevant cells of the analytical framework. In addition the extent to which positive and negative impacts can indentified is indicated.

**Conclusion** A review of the report if provided and future directions for research are identified.

The analytic framework is seen as extending previous impact models particularly by identifying the four levels of analysis and including "cultural impacts" as a specific impact dimension.

Concern is expressed about the problematic nature of gambling research because of the complexity of gambling impacts, lack of data, inadequate methods, imperfect models and questionable assumptions.

Finally caution is advised in the uncritical transference of overseas research findings to the Australian environment.

Examination of both the popular and academic literature shows that a large number of indicators have been used to measure the social and economic impacts of gaming<sup>1</sup>—with each source of data providing only part of the “impact picture”. Significant challenges remain in achieving a holistic understanding of the effects of gaming. Principal among these challenges is the need to collect and analyse objective evidence. Poor information availability and measurement concerns impose additional problems. A model capable of organising and integrating the diverse findings, units of analysis, samples and methods found in gaming impact research is required if informed decisions about the “benefits and costs of gaming” and “future directions for gaming research” are to be made. That is, a holistic understanding of gaming effects would be aided at this point by the development of a comprehensive framework that supports the integration and evaluation of current research methods and findings in the gaming literature. This project aims to create such a framework.

The Social and Economic Research Centre (SERC)<sup>2</sup> was commissioned by the Victorian Casino and Gaming Authority (the Authority or VCGA) to develop a comprehensive analytical framework that provides information on: (a) the positive and negative social impacts of gaming (and associated indicators); and (b) the links between impacts found at different levels of analysis and/or using different research methodologies. This report documents the steps undertaken to construct this framework and its subsequent use in summarising and evaluating the findings of the Authority’s *1998-99 Research Program*.

## **1.1 Research objectives and associated requirements**

As set out in the project brief, this project has been guided by terms of reference, which include the following research objectives and associated requirements<sup>3</sup>.

### **Research objective 1 and associated requirements**

Development of an analytical social framework and associated indicators to provide a model for the analysis and evaluation of the social impacts of gaming. This will involve consultation with other experts and organisations about the availability of relevant statistics to ensure the continued usefulness of the model in analysing the social impacts of gaming. It is critical that this analytical social framework establish linkages between:

- the various levels at which data is collected (State, regional, community, household and individual);

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<sup>1</sup> In this report, the following definitions of gambling, gaming, and wagering are used. Gambling is the lawful placement of a wager or bet on the outcome of a future uncertain event. In contrast, gaming comprises all legal forms of gambling other than wagering—including lotteries, gaming machines, casino table games and keno. Wagering, as a category of gambling, refers to gambling that is not gaming—the principal forms here are racing and sports betting (Australian Institute for Gambling Research, 1999, p. xix).

<sup>2</sup> The Social and Economic Research Centre (SERC) was established at the University of Queensland early in 1997 for the specific purpose of facilitating multi-disciplinary research into significant economic and social issues.

<sup>3</sup> Victorian Casino and Gaming Authority, Modified Tender Brief, *Sections 2 and 3 Gaming—Framework for Evaluation, and Summary of the 1998-99 Findings*.

- the multiple dimensions at which gaming impacts occur (families and individuals, communities and neighbourhoods, society and culture, and the economy); and
- the positive and negative impacts at the level of data collection and the dimension of each impact.

In order to establish this framework, the following matters require consideration.

- Improvements that can be made to the reporting of both the economic and social impacts of gaming (including an evaluation of frameworks used, both nationally and internationally, to report on the impacts of similar activities);
- The ability to address the positive impacts on the lifestyle and wellbeing of individuals and communities as well as the more easily measurable negative effects;
- The availability of data required for the development of a framework for evaluation (for example: availability of data related to the causes of welfare assistance);
- The ability to compare gaming with other so-called “social ills” (eg. alcohol, smoking, illegal drug use); and
- The indicators/outputs that would be derived to report the impacts.

Achievement of this objective requires that the consultant:

- confer with consultants undertaking other projects on behalf of the Authority, in particular, the National Institute of Economic and Industry Research (NIEIR), who have undertaken the project, *The Economic Impact of Gambling*, to obtain input into the treatment of impacts in the framework;
- suggest ways of developing or obtaining relevant data for the model where they currently do not exist.

### ***Research objective 2 and associated requirements***

Submission of a report based on the analytical social framework developed to meet Research Objective 1. This report is to:

- build on research previously undertaken by the Victorian Casino and Gaming Authority (the Authority) and critically analyse and evaluate the research projects undertaken by the Authority as part of the *1998-99 Research Program*; and
- draw conclusions about the social and economic impacts of gaming by highlighting instances of convergence and divergence of findings.

Achievement of this objective requires that the consultant:

- Undertake initial consultations with the following groups to ensure that critical issues are identified and addressed in the report:
  - i. consultants who have undertaken research projects on behalf of the Authority;
  - ii. church and community groups;
  - iii. industry groups;

- iv. municipal groups; and
  - v. the Department of Human Services.
- Critically analyse research conducted and present the findings in the context of the social framework.

## **1.2 Project scope**

The primary focus of this project is on the collation and analysis of existing research (ie. secondary data)—with the aim of integrating findings from both national and international gaming research and relevant social impact models. In doing so, attention will be given to issues of data availability and adequacy and the subsequent implications of these issues for effectively determining gaming impacts. That is, the intention is to establish an integrated picture of gaming impacts and gaps in our current understanding of these impacts, rather than to identify gaming impacts for the purpose of informing gaming regulations and related policies.

It is important to stress that, in line with the terms of reference provided by the Authority, this research project was designed specifically to examine gaming as distinct from gambling (refer to definitions provided in Footnote 1 of this section). However, where necessary, general gambling research has been drawn on to support the development of the analytical framework proposed in Section 5. The terms “gaming research” and “gambling research” will be used to distinguish these different research areas for the reader.

## **1.3 Report structure**

**Section 2** of this report: (1) provides a brief overview of the context in which the Authority’s *1998-99 Research Program* was developed, and (2) summarises statistical data indicating the growth and current magnitude of the Victorian gaming industry. Inclusion of this background information aims to familiarise readers with the environment in which this project was conceived and conducted.

**Section 3** of the report describes the methodology used: (1) to construct a comprehensive analytical framework of gaming impacts (*Research Objective 1*), and (2) to summarise and evaluate the Authority’s *1998-99 Research Program* in terms of this analytical framework (*Research Objective 2*). Data collation and integration strategies undertaken at each stage of the project are discussed in relation to meeting the research objectives and associated requirements outlined in Section 1.1 of this report.

**Section 4** of the report reviews the Australian and international gaming research used in developing the analytical framework. This review focuses on identifying the types of gaming impacts examined in the literature and the range of indicators used to measure these impacts.

**Section 5** of the report sets out the structure for the comprehensive analytical framework of gaming impacts developed to meet *Research Objective 1*. A detailed description of each component within this framework is provided in this section.

**Section 6** of the report uses the analytical framework (set out in Section 5) to summarise and evaluate the findings of each project in the Authority's *1998-99 Research Program*. Here the aim is: (1) to identify the components of the analytical framework addressed in each project, and (2) to discuss how the methodology and findings of each project adds to a holistic understanding of gaming impacts (*Research Objective 2*).

**Section 7** of the report builds on the discussion in Section 6 by integrating the results of the Authority's *1998-99 Research Program*. In particular, methodological factors contributing to convergence and divergence of findings across the *1998-99 Research Program* are discussed.

**Section 8** of the report uses the analytical framework (set out in Section 5) to suggest: (1) methods for improving the measurement and reporting of gaming impacts, and (2) new directions for gaming impact research.

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## **2. Background to the project**

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This section aims: (1) to offer a brief overview of the context in which the Authority's *1998-99 Research Program* was developed, and (2) to summarise statistical data indicating the growth and current magnitude of the Victorian gaming industry. This descriptive information is provided here in order to familiarise readers with the environment in which this project was conceived and undertaken, and to support material contained in later sections of the report.

## **2.1 The Victorian Casino and Gaming Authority Research Charter and Research Scoping Matrix**

The Authority is a statutory body established by the Victorian Government under the *Gaming and Betting Act 1994* which, together with the *Casino Control Act 1991* and the *Gaming Machine Control Act 1991*, sets out the general framework for regulation of gaming, casino and wagering activities in Victoria. The Authority regulates and monitors Victoria's gambling activities and acts to ensure that the highest standards of integrity in the industry are achieved in an efficient and effective manner.

Apart from its regulatory and monitoring activities, the Authority has a statutory responsibility to carry out research into the social and economic impact of gaming in Victoria. The research conducted by the Authority provides a store of information as to the changes in community gambling patterns and perceptions over time, and insight into the impact of gaming and gambling in Victoria. This information is also used to provide advice to the Minister on policy issues with respect to gambling.

Research undertaken by the Authority is funded from the Community Support Fund, established under section 138 of the *Gaming Machine Control Act 1991* and drawn from  $8\frac{1}{3}$  per cent of the net cash balance from gaming conducted in hotels. Table 2.1 contains the principles for operation underlying the Authority's Research Charter.

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**Table 2.1: Victorian Casino and Gaming Authority Research Charter – Set of Principles for Operation**

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*The Gaming Machine Control Act 1991*, section 109(e), requires the Authority to fund research into, and advise the Minister for Gaming on, the social impact of gaming. The Authority will achieve this objective by adopting and operating within a broad set of principles (as detailed below). These principles establish and describe parameters for the purpose of implementation of functional roles and responsibilities.

1. The fundamental purpose of research conducted by the Authority is to gather data in a format that will enable it to:
  - make available to the public reliable information on the social impact of gambling;
  - put its views to the Government on policy issues in a timely manner; and
  - carry out regulatory functions and recommend implementation of changes to these functions as appropriate.
2. The Authority will undertake and/or commission such research as is necessary to ensure that the social impact of gaming is thoroughly documented and understood for the benefit of the community, the Government and the industry.
3. Co-operation and co-ordination of the research effort among and between the industry and community will be encouraged, to facilitate the rationalisation and standardisation of research into the social impact of gambling and to achieve reciprocal benefit and cost savings.
4. To assess social impact as required under the Act, social impact will be defined for this purpose as:
  - impact on individuals and families;
  - impact on communities and neighbourhoods;
  - cultural and social impact; and
  - socio-economic impact.
5. The Authority will monitor significant research developments both within Victoria and on the interstate and international levels as part of ongoing efforts to maintain Victoria at the forefront of gambling studies and research.
6. The Authority will establish and maintain basic data sets such as are necessary to enable it to perform its research and other functions.
7. From time to time, specific issues of concern within the community will arise that the Authority will research, report on and provide its views on policy matters to the Minister.
8. The Authority will identify and implement necessary longitudinal and consequential impact studies.
9. The Authority will disseminate results of this research wherever possible (taking into account commercial sensitivities) to government, commercial operators, other researchers, interest groups, media and the general public.

As summarised in the Authority's Research Scoping Matrix (see Figure 2.1), research undertaken by the Authority covers several levels of analysis and dimensions of gambling impact for which data is collected and analysed. This matrix

was designed to determine where research efforts into the impact of gaming in Victoria would be directed. Appendix A lists in chronological order the research projects undertaken by the Authority since its inception.

### Figure 2.1: VCGA Research Scoping Matrix

A comprehensive data and research base would inform:

<p style="text-align: center;"><b>Families and individuals</b></p> <p>Who is gambling</p> <ul style="list-style-type: none"> <li>• Age and sex</li> <li>• Education and income</li> <li>• Nationality</li> <li>• Residential locality</li> <li>• Income disposal patterns</li> </ul> <p>Use of time</p> <ul style="list-style-type: none"> <li>• Leisure</li> <li>• Work</li> <li>• Family</li> </ul> <p>Effect on family life</p> <ul style="list-style-type: none"> <li>• Stability</li> <li>• Cohesion</li> </ul> <p>Problem gambling</p> <ul style="list-style-type: none"> <li>• Nature and impact</li> </ul> <p>Social life impact</p> <ul style="list-style-type: none"> <li>• Loss and gain</li> </ul>	<p style="text-align: center;"><b>Communities and neighbourhoods</b></p> <p>Location of venues</p> <p>Effect on organisations</p> <ul style="list-style-type: none"> <li>• Ability to self-fund through minor gambling</li> </ul> <p>Local facilities impact</p> <ul style="list-style-type: none"> <li>• Ability of clubs to expand and provide</li> </ul> <p>Effect on services</p> <ul style="list-style-type: none"> <li>• Shopping centres</li> </ul> <p>Community participation levels</p> <ul style="list-style-type: none"> <li>• Sport</li> <li>• Arts activities</li> <li>• Entertainment</li> </ul>
<p style="text-align: center;"><b>Society and Culture</b></p> <p>Changing perceptions of gambling</p> <p>Moral attitudes</p> <p>Differential risk to vulnerable groups (eg. young people)</p> <p>Visibility of new forms of gambling</p> <p>Overall crime levels</p> <p>Cultural identity</p> <p>Gaming as recreation</p> <p>Effect on city life and urban renewal</p> <p>Community safety and confidence</p> <p>Gambling as a cultural product</p> <p>Historical perspectives</p>	<p style="text-align: center;"><b>The Economy</b></p> <p>Tourism</p> <ul style="list-style-type: none"> <li>• “At home” tourists</li> <li>• Regional, interstate, international</li> </ul> <p>Employment</p> <ul style="list-style-type: none"> <li>• Increases and loss</li> <li>• Shifts and transfers</li> <li>• Regional impact</li> <li>• Need for training</li> </ul> <p>Business</p> <ul style="list-style-type: none"> <li>• Viability of clubs, hotels and entertainment venues</li> <li>• Export development and substitution</li> <li>• Market segmentation</li> </ul> <p>Beneficiaries</p>

- |  |  |
|--|--|
|  | <ul style="list-style-type: none"><li>• Governments</li><li>• Australian or overseas operators</li></ul> |
|--|--|

## **2.2 The Victorian Casino and Gaming Authority 1998-99 Research Program**

On 1 July 1998 the Authority announced its *1998-99 Research Program*. In total, the *1998-99 Research Program* comprises an integrated package of eleven distinct projects: one on-going survey series, eight new projects and the introduction of two longitudinal surveys (see Table 2.2). Together these projects constitute a comprehensive program which further supports the Authority's commitment to providing world class research into the effects of gaming. As has previously been the case, the research reports arising from the *1998-99 Research Program* will be published and made available to the public.

This current research program was developed after consultation with key organisations, including the Victorian Council of Churches – Gambling Task Force and gaming industry representatives. An important part of the development process was the consideration of advice from the consultants who had previously conducted research for the Authority, the assessment made by the consultant as part of the project *Summary of Findings 1996-97 Research Program*, and comments made by the Auditor-General in the report *Special Report No. 54 – Victoria's Gaming Industry – An insight into the role of the regulator*. The projects comprising the current program are in line with the Authority's Research Charter (see Table 2.1).

The *1998-99 Research Program* complements and builds on the research already undertaken by the Authority (see Appendix A). Further, the projects will assist the Authority in expanding its understanding of long-term gaming trends, and provide the Government with information to develop policies that will have regard to the social and economic effects of gambling in Victoria.

**Table 2.2: The Victorian Casino and Gaming Authority 1998-99 Research Program**

Project title	Consultant	Brief description
1. "Gaming – Comparative History and Analysis, Framework for Evaluation and Summary of 1998-99 Findings" <sup>a</sup>	Stage 1: Australian Institute for Gambling Research (AIGR) Stages 2 and 3: Social and Economic Research Centre (SERC)	A study of the comparative history of gaming impacts in Australasia, followed by the development of a rigorous framework to measure the social impacts of gaming and the subsequent use of this framework in critically analysing and summarising the whole of the <i>1998-99 Research Program</i> .
2. "Continuing Surveys of Community Gambling Patterns and Perceptions"	Roy Morgan Research Limited	The sixth and seventh surveys of community gambling patterns and perceptions.
3. "Evaluation and Further Use of Existing Data Sets" <sup>b</sup>	Geospend	A review, including geo-demographic profiling, of existing research data sets of the Authority.
4. "Problem Gambling Measurement Instrument" <sup>b</sup>	Flinders Technologies Pty Ltd	The development of a survey instrument to accurately measure the prevalence of problem gambling in the Victorian context.
5. "The Economic Impact of Gambling"	National Institute of Economic and Industry Research (NIEIR)	An examination of the combined overall economic impact of gaming from the macro (State) level through to the base micro (individual household/person) level.
6. "Hotel and Club Industry Gaming Impact Study"	Market Solutions (Australia) Pty Ltd	An examination of the impact of gaming on the club and hotel industry which considers the provision of dining and other recreational, cultural and social facilities, the changes in the culture and the effect on the entertainment and music industries.
7. "The Impact of the Expansion of Gaming on the Tourism, Entertainment, and Leisure Industries"	Consortium from the University of Western Sydney (Australian Institute for Gambling Research), RMIT (Department of Hospitality, Tourism and Leisure), and the University of Technology, Sydney	A study of the impact and role of the expansion of gaming in the tourism, entertainment and leisure industries.

	(School of Leisure and Tourism Studies)	
8. “Longitudinal Examination of Perceptions and their Relationship with Actual Findings”	Marketing Science Centre, University of South Australia	A longitudinal examination of people’s perceptions of electronic gaming machines and the casino and the relationship of these perceptions to actual gaming industry behaviours and events.
9. “The Impact of Gaming on Specific Cultural Groups”	Consortium comprising Cultural Patterns Australia, Thomas & Associates and the Australian Multicultural Foundation	An examination of the impact of gaming on specific cultural groups.
10. “The Impact of Gaming and Crime Statistics”	Centre for Criminology & Criminal Justice	An evaluation of the availability of suitable crime statistics to enable meaningful analysis of the association between gambling and crime rates.
11. “Longitudinal Community Impact Study”	KPMG Management Consulting	A longitudinal study of the impact of gaming on specific Victorian metropolitan and non-metropolitan communities.

<sup>a</sup> This report was prepared as part of this project.

<sup>b</sup> Given the nature of their research objectives, timeframes for Projects 3 and 4 were extended and their final reports were not completed at the time this report was prepared. Therefore, Projects 3 and 4 are not discussed as part of this report.

A brief description of each project in the Authority’s *1998-99 Research Program* is provided below. Here, the aim is to introduce the broad purpose of each project—while Appendix B contains detailed information on the background and specific research objectives for each project.

### **1. Gaming—comparative history and analysis, framework for evaluation and summary of 1998-99 findings**

Stage 1 of this project develops a comparative history of gaming and analyses gaming behaviours and attitudes in the Australian State jurisdictions and New Zealand. The overall purpose is to establish where Victoria is placed with regard to research undertaken and to highlight initiatives that would enhance the Authority’s research efforts. Stages 2 and 3 of this project (discussed in this report) address the need to develop a rigorous social model of the impacts of gaming. A key aim in the construction of this model was to use it in evaluating and integrating the findings of the Authority’s *1998-99 Research Program*.

### **2. Continuing surveys of community gambling patterns and perceptions**

The sixth and seventh surveys of community gambling patterns and perceptions form part of an ongoing survey series commissioned by the Authority. In addition to developing and using the sixth and seventh surveys to continue the collection of information on community gambling patterns and perceptions, this project examines methods for improving the quality and consistency of data across the survey series.

### ***3. Evaluation and further use of existing data sets***

This project reviews existing data sets collected as part of the Authority's 1996-97 Research Program and the Community Gambling Patterns and Perceptions Survey series, and evaluates the integration of this data into the Baseline Database.

### ***4. Problem gambling measurement instrument***

This project develops a new problem gambling instrument. In particular, the project: (1) establishes a new set of criteria for the effective measurement of problem gambling which form the basis for the instrument developed, and (2) undertakes pilot surveys to test the hypothesis used in framing the questions for the new problem gambling instrument.

### ***5. The economic impact of gambling***

This project examines the combined overall economic impact of gaming from the macro (State) level through to the base micro (individual household/person) level. Stage 1 of the project reviews existing data for profiling purposes to ensure that the profiles developed are adaptable for micro-simulation purposes. Stage 2 of the project provides an assessment of the economic impacts of gaming at the levels of State, regional or geographical area, community, and household/individual.

## ***6. Hotel and club industry gaming impact study***

In examining the impact of the introduction and expansion of gaming on the hotel and club industry in Victoria, this project addresses issues such as the impact of hotel and club gaming on the entertainment and music industry, and the provision of dining and other recreational, cultural and social facilities.

## ***7. The impact of the expansion of gaming on the tourism, entertainment, and leisure industries***

This project examines the place of gambling in the tourism, entertainment, and leisure industries and investigates changes in patterns of employment, expenditure, and behaviour between these sectors. Data is analysed at both the macro and micro level, and considers the social and economic impacts arising from the expansion of gaming.

## ***8. Longitudinal examination of perceptions and their relationship with actual findings***

The overall aim of this project is to provide a greater understanding of individual perceptions and attitudes towards the gaming industry and the participation of people in casino gambling and the playing of electronic gaming machines in clubs and hotels. Of key interest is how these perceptions and attitudes relate to actual gaming behaviour. Through this, it is hoped to reconcile the apparent inconsistency between individuals' perceptions and their actual behaviour in relation to gaming, and their views of the participation of the community at large. A further aim of this project is to track individuals' perceptions and behaviours over time, gaining insight into patterns and sources of change.

## ***9. The impact of gaming on specific cultural groups***

Stage 1 of this project investigates patterns of behaviour and attitudes related to gambling in several cultural groups in Victoria when compared with the Victorian population as a whole. In Stage 2 of the project, four specific cultural groups are identified and examined in terms of the impact of gaming within these communities.

## ***10. The impact of gaming and crime statistics***

This project evaluates the availability and adequacy of existing crime statistics for identifying meaningful associations between gaming and criminal behaviour. The broad purpose is to: (1) examine and assess existing data availability, (2) identify categories for which data is to be collected, and (3) recommend appropriate data generation and collection strategies.

## ***11. Longitudinal community impact study***

This project involves a longitudinal study of the impact of gaming on specific metropolitan and non-metropolitan communities. A major aim is to identify and report on the economic and social conditions within these municipalities and their relationship to the introduction and development of gaming venues and the opening of the Crown Casino.

## 2.3 Brief overview of the growth and current magnitude of the Victorian gaming industry

A range of descriptive statistics have been used to indicate the growth and current magnitude of gambling and gaming in Victoria, and in particular that of machine gaming (for example, frequently cited indicators include gambling and/or gaming participation rates, real per capita gambling and/or gaming expenditure, government revenue from gambling and/or gaming, and numbers of gaming machines and sites). Trends in the growth of the Victorian gaming industry are briefly described here in terms of such indicators. Data on other Australian states and territories is also included for comparative purposes. These statistics are provided here to support material discussed in later sections of the report.

### ***Community gambling patterns—participation in gambling and gaming***

The *Productivity Commission National Gambling Survey* undertaken in 1999 confirmed the high levels of participation in gambling activities found in the *Survey of Community Gambling Patterns and Perceptions* series conducted by the Authority in Victoria. Table 2.3 shows the gambling participation rates and frequency of gambling by Australians found by the Productivity Commission (1999).

**Table 2.3: Participation and frequency of gambling by Australians**

Form of gambling	Total participation per cent	Frequency per cent			
		Less than once a month	1 to 3 times a month	1 to 3 times a week	More than 3 times a week
EGMs	39	62	25	12	2
- played at a club	28	63	24	12	1
- played at a hotel/pub	16	65	25	10	0
- played at a casino	16	87	11	2	0
Racing	25	71	14	13	3
Lotto or other lottery game	60	25	24	45	6
Instant scratch tickets	47	51	34	14	1
Keno	16	72	20	7	1
Casino table games	10	83	15	2	0
Bingo	5	49	22	27	2
Sports betting	6	54	24	23	0
Played an internet casino game	0.4	63	13	21	3
Private gambling	5	66	23	9	2
<b>Any gambling activity</b>	<b>82</b>	<b>27</b>	<b>25</b>	<b>35</b>	<b>12</b>

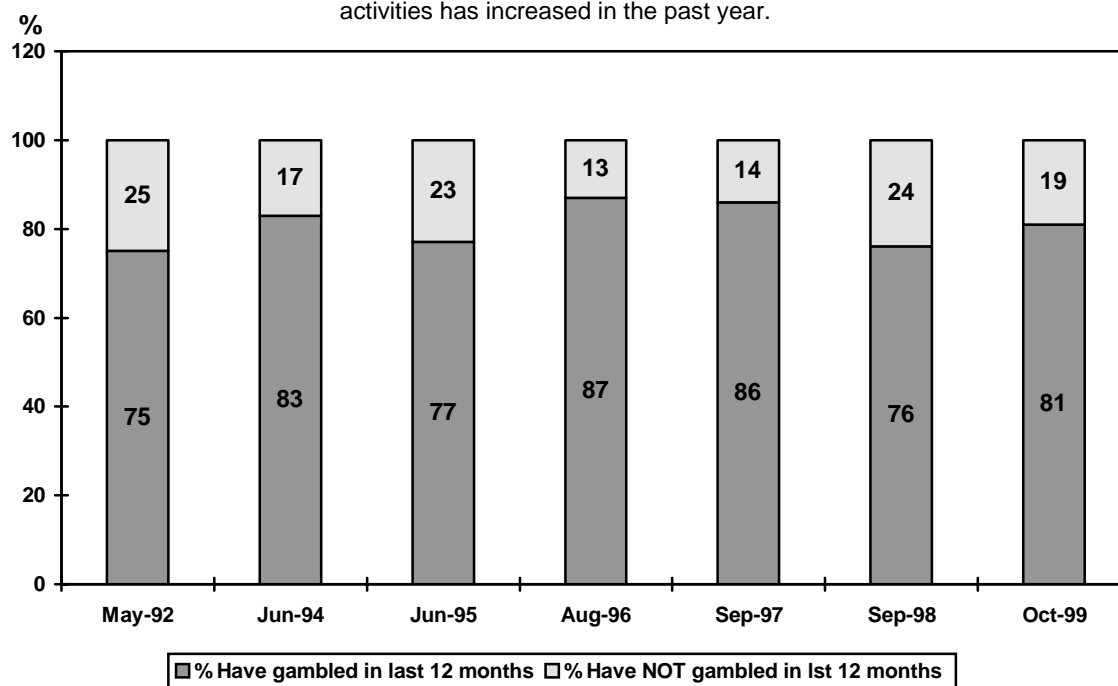
Source: Productivity Commission 1999, *Australia's Gambling Industries*, Report No. 10, AusInfo, Canberra.

Based on data from the VCGA *Survey of Community Gambling Patterns and Perceptions* series in Victoria, Figure 2.2 shows that participation in gambling

activities increased in 1999, with 81 per cent of Victorians having participated in the last twelve months in at least one of the gambling activities surveyed<sup>4</sup>.

**Figure 2.2 Participation rates**

Overall, the level of participation in gambling activities has increased in the past year.



Base: Total Respondents

Source: Roy Morgan Research (2000), *Seventh Survey of Community Gambling Patterns and Perceptions*, VCGA, Melbourne, p. 46.

Despite the increase in the proportion of the Victorian adult population participating in gambling (see Figure 2.2), Figure 2.3 shows that participation rates in Victoria for most gambling activities have remained relatively steady<sup>5</sup>. In summarising the main trends from the data in this figure, Roy Morgan Research (2000, p. 49) noted the following:

- The most apparent change in participation rates for individual gambling activities in 1999 was an increase in raffles participation—at 39 per cent, up 6 points from 1998;

<sup>4</sup> Data for this figure was based on the following survey question: Which of the following activities or games have you played, entered or bet on in the past 12 months?: (a) Raffles, (b) Bingo, (c) Lotto, Tatts lotto, Oz lotto, Tatts Keno, or Powerball, (d) Scratch tickets, Instant lotto, or Scratch 'n' win, (e) Playing cards for money privately (at home or any other place), (f) Thoroughbred horse racing (the gallops), (g) Trotting or harness racing (the trots), (h) Greyhound racing (the dogs), (i) Poker machines ("pokies") at a club or hotel, (j) Poker machines ("pokies") at the Melbourne Crown Casino or casinos outside Victoria, (k) Any other game at the Melbourne Crown Casino or casinos outside Victoria, (l) Footy betting on the TAB (Footybet), (m) Betting on sports with Sportsbet or other bookmakers, (n) Soccer Pools, (o) Keno at a club or hotel, (p) Casino games for money on the Internet, and (q) None of these (Roy Morgan Research, 2000, p. 252).

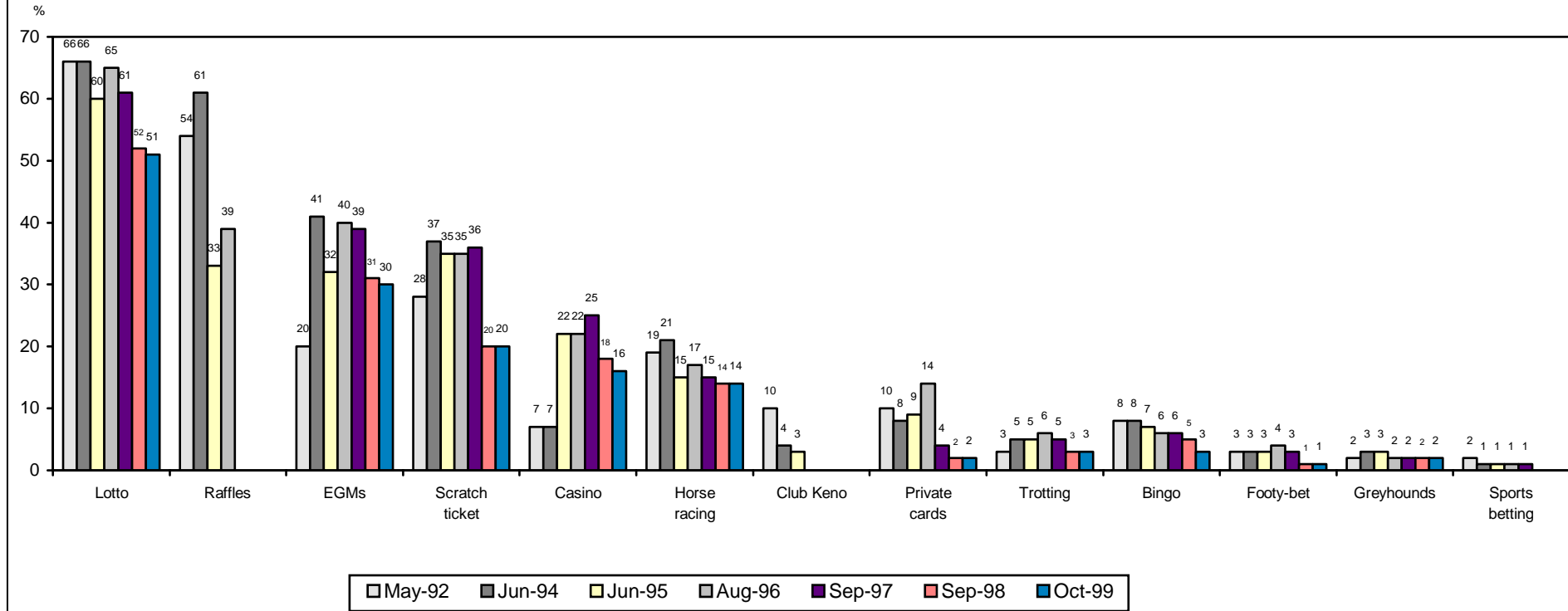
<sup>5</sup> With participation rates for Soccer Pools and casino games for money on the Internet below 1 per cent for the last two years, these activities have not been displayed in Figure 2.3.

- Despite a 1 point decrease from 1998, lotto remains the gambling activity participated in by more Victorians than any other form of gambling (51 per cent);
- EGM gambling retains the third highest participation rate of any gambling activity after lotto and raffles, despite a slight decrease in 1999 to 30 per cent—down 1 point from 1998;
- Participation in scratch tickets gambling remained steady at 20 per cent in 1999—the same level as in 1998, but substantially lower than participation rates in prior years of the survey;
- Having increased substantially in 1995, after the introduction of Melbourne's temporary Crown Casino in June 1994, (from 7 per cent to 22 per cent), casino gambling participation decreased to 16 per cent in 1999, having peaked at 25 per cent in 1997.
- Participation in thoroughbred horse racing remained steady at 14 per cent—the same level as in 1998;
- After a substantial decrease in 1998 (from 10 per cent to 4 per cent), participation in Club Keno decreased another point to 3 per cent in 1999;
- Participation in private cards remained steady at 2 per cent in 1999—the same level as in 1998, but substantially lower than participation rates in prior years of the survey. However, it should be noted that the definition changed in 1997, and was changed again in 1999 from “informal cards for money not at the casino” to “playing cards for money privately (at home or any other place)”; and
- As in previous years, low levels of participation were recorded for all other measured forms of gambling, including trotting/harness racing, bingo, Footybet, greyhounds, sports betting, Soccer Pools and Casino games for money on the Internet. At no point in this survey have participation rates for any of these activities risen as high as 10 per cent, and in general they appear to be remaining steady (eg. greyhounds) or declining (eg. bingo).

It should be noted that, despite an increase in gambling participation rates in Victoria, overall community attitudes towards gambling remain negative (Roy Morgan Research, 2000). Appendix C provides time-series data on Victorians' attitudes to gambling.

**Figure 2.3: Participation by activity**

**Total Victorian gambling patterns**



Base: Total respondents

Note: Number of activities included in the survey increased in 1995, 1996 and 1997.

Soccer Pools and Casino games for money on the Internet have not been included in the chart above because of very low participation rates.

Source: Roy Morgan Research (2000), *Seventh Survey of Community Gambling Patterns and Perceptions*, VCGA, Melbourne, p. 48

***Community gambling patterns—expenditure on gambling and gaming***

Expenditure on different forms of gambling provides a basic economic measure of gambling as entertainment. Turnover data also may provide an indication of the entertainment value of gambling, but is less reliable for comparative purposes (Australian Institute for Gambling Research, 1999).

Tables 2.4a and 2.4b show gambling expenditure and per capita gambling expenditure (respectively) by form of gambling in each Australian state or territory for 1998-99. In particular, the data in these tables indicate that during 1998-99:

- Total (and per capita) expenditure on gaming exceeded that on racing in all Australian states and territories;
- Total (and per capita) expenditure on gaming machines comprised the largest amount of gambling and gaming expenditure for all states and territories apart from Western Australia, Tasmania, and the Northern Territory. It is important to note here that access to gaming machines is restricted to casino gaming within Western Australia. The data for Tasmania and the Northern Territory indicate the relatively recent introduction of gaming machines outside of casinos.

**Table 2.4a: Gambling Expenditure 1998-99**

Gambling forum	NSW (\$m)	Vic (\$m)	Qld (\$m)	SA (\$m)	WA (\$m)	Tas (\$m)	ACT (\$m)	NT (\$m)	Total (\$m)
TAB	566.790	406.029	239.700	96.429	133.780	27.454	18.575	11.540	1,500.297
On-course totalisator	50.132	33.061	19.400	6.210	11.931	1.542	1.169	2.484	125.929
On-course bookmater	27.908	15.693	12.600	3.947	9.421	0.676	1.161	6.329	77.735
Off-course bookmaker				0.151	-	-	-	-	0.151
Total racing	644.830	454.783	271.700	106.737	155.132	29.672	20.905	20.353	1,704.112
per cent of HDI	0.49 %	0.49 %	0.45 %	0.41 %	0.46 %	0.39 %	0.27 %	0.53 %	0.47 %
Lottery	51.167	5.422	2.419			0.364	1.148	1.304	61.824
Lotto, tattslotto	255.190	282.067	201.862	70.599	145.100	16.150	12.386	11.902	995.256
Pools	3.795	1.256	1.728	0.288	0.823	0.077	0.085	0.017	8.069
Minor gaming			128.508	19.278	26.112	9.921	-	-	183.819
Gaming machines	3,487.4 87	1,954.1 92	757.411	442.466		39.291	147.193	24.297	6,852.337
Casino	479.700	721.852	476.800	76.648	285.760	82.167	16.285	54.430	2,193.642
Instant lottery	61.925	23.814	98.986	9.286	31.987	2.307	2.142	1.410	231.857
Keno	89.625	7.197	52.406	12.614	-	16.477	-	-	178.319
Total gaming	4,428.8 89	2,995.8 30	1,720.1 20	631.179	489.782	166.754	179.239	93.360	10,705.123
per cent of HDI	3.40 %	3.21 %	2.87 %	2.40 %	1.46 %	2.19 %	2.29 %	2.42 %	2.95 %
TAB Fixed odds	0.000	4.249	0.000	0.000	0.000	0.000	0.000	0.000	4.249
TAB Tote odds	0.000	1.501	0.800	0.495	0.719	0.036	0.000	0.000	3.551
Bookmaker and other Fixed odds	2.556	0.154	0.000	0.213	0.400	0.000	0.000	8.559	11.882
Bookmaker and other Pool betting	0.000 %	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total sportsbetting	2.556	5.904	0.800	0.708	1.119	0.016	0.000	8.559	19.682

per cent of HDI	0.00 %	0.01 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.22 %	0.01 %
Total all gambling	5,076.2	3,456.4	1,992.6	738.624	646.033	196.462	200.144	122.272	12,428.917
	75	87	20						
per cent of HDI	3.89 %	3.70 %	3.32 %	2.81 %	1.93 %	2.58 %	2.56 %	3.18 %	3.43 %

Source: Tasmanian Gaming Commission (2000), *Australian Gambling Statistics 1973-74 to 1998-99*, Centre for Regional Economic Analysis, University of Tasmania.

**Table 2.4b: Per capita expenditure 1998-99**

Gambling forum	NSW	Vic	Qld	SA	WA	Tas	ACT	NT	Total
TAB	119.20	115.48	93.82	85.33	98.95	78.82	81.29	88.18	107.05
On-course totalisator	10.54	9.40	7.59	5.50	8.82	4.43	5.12	18.98	8.98
On-course bookmater	5.87	4.46	4.93	3.49	6.97	1.94	5.08	48.36	5.55
Off-course bookmaker	-	-	-	0.13	-	-	-	-	0.01
Total racing	135.61	129.35	106.35	94.45	114.74	85.18	91.49	155.51	121.59
Lottery	10.76	1.54	0.95	-	-	1.04	5.02	9.96	4.41
Tattslotto, lotto	53.67	80.23	79.01	62.47	107.32	46.36	54.21	90.94	71.01
Pools	0.80	0.36	0.68	0.25	0.61	0.22	0.37	0.13	8.58
Bingo and minor gaming	-	-	50.30	17.06	19.31	28.48	-	-	13.12
Gaming machines	733.44	555.81	296.46	391.54	-	112.80	644.18	185.65	488.91
Casino	100.88	205.31	186.63	67.83	211.36	235.89	71.27	415.89	156.52
Instant lottery	13.02	6.77	38.74	8.22	23.66	6.62	9.37	10.77	16.54
Keno	18.85	2.05	20.51	11.16	-	47.30	-	-	12.72
Total gaming	931.42	852.06	673.28	558.14	367.26	478.37	784.43	713.35	763.80
TAB Fixed odds	-	1.21	-	-	-	-	-	-	0.00
TAB Tote odds	-	0.43	0.31	0.44	0.53	0.10	-	-	0.25
Bookmaker and other Fixed odds	0.54	0.04	-	0.19	0.30	-	-	65.40	0.85
Bookmaker and other Pool betting	-	-	-	-	-	-	-	-	-
Total sportsbetting	0.54	1.68	0.31	0.63	0.83	0.10	-	65.40	1.40
Total all gambling	1,067.5	983.09	779.94	653.61	477.83	564.01	875.92	934.27	886.80

Source: Tasmanian Gaming Commission (2000), *Australian Gambling Statistics 1973-74 to 1998-99*, Centre for Regional Economic Analysis, University of Tasmania.



Data on gambling expenditure and real per capita gambling expenditure by form of gambling in Victoria for the period 1973-74 to 1998-99 are displayed in Table 2.5 and 2.6 respectively. These tables show a shift in the amount of racing expenditure relative to gaming expenditure—with gaming accounting for a larger amount of gambling expenditure than racing since the late 1980's. Although there has been a general decline in racing expenditure from 1973-74 to 1998-1999, increases in gaming expenditure over the last decade have far exceeded the relative decline in racing expenditure. This suggests that increased gaming expenditure represents more than a simple diversion of consumer expenditure away from one form of gambling to another (ie. from racing to gaming).

**Table 2.5: Victoria—Gambling expenditure**

Year	Total racing \$m	Total gaming \$m	Total sportsbetting \$m	Total gambling \$m
1973-74	87,267	19,720		106,987
1974-75	109,281	36,498		145,779
1975-76	115,878	54,784		170,662
1976-77	128,522	76,655		205,177
1977-78	134,992	97,458		232,450
1978-79	138,516	122,092		260,608
1979-80	147,450	139,665		287,116
1980-81	161,738	152,923		314,661
1981-82	172,658	188,130		360,787
1982-83	192,823	197,276		390,099
1983-84	224,042	233,822		457,864
1984-85	240,813	260,011		500,824
1985-86	275,112	264,410		539,523
1986-87	300,394	293,873		594,309
1987-88	331,394	329,669		661,063
1988-89	361,156	347,632		708,788
1989-90	387,621	416,609		804,230
1990-91	397,924	456,903		854,827
1991-92	404,055	499,771		903,827
1992-93	414,163	698,094		1,112,257
1993-94	409,122	1,099,067		1,508,189
1994-95	409,808	1,702,778	2,257	2,114,844
1995-96	428,005	2,114,108	3,724	2,545,837
1996-97	423,264	2,329,903	3,569	2,756,736
1997-98	431,322	2,759,609	6,166	3,197,097
1998-99	454,783	2,995,860	5,904	3,456,547

Source: Tasmanian Gaming Commission (2000), *Australian Gambling Statistics 1973-74 to 1998-99*, Centre for Regional Economic Analysis, University of Tasmania

**Table 2.6: Victoria – Real per capita gambling expenditure**

Year	Racing \$m	Gaming \$m	Sports- betting \$m	Total gambling \$m
1973-74	187.50	42.37	-	229.87
1974-75	197.20	65.86	-	263.06
1975-76	182.57	86.31	-	268.89
1976-77	175.77	104.84	-	280.61
1977-78	166.13	119.94	-	286.06
1978-79	155.37	136.94	-	292.31
1979-80	147.95	140.14	-	288.10
1980-81	146.45	138.47	-	284.92
1981-82	139.31	131.80	-	291.11
1982-83	136.93	140.09	-	277.03
1983-84	146.60	153.00	-	299.61
1984-85	148.77	160.63	-	309.39
1985-86	154.27	148.27	-	302.54
1986-87	151.67	148.35	-	300.02
1987-88	153.04	152.24	-	305.28
1988-89	152.66	146.95	-	299.61
1989-90	148.71	159.83	-	308.53
1990-91	142.29	163.38	-	305.67
1991-92	139.88	173.02	-	312.91
1992-93	140.34	236.55	-	376.89
1993-94	135.21	363.23	-	498.44
1994-95	130.55	542.45	0.72	673.71
1995-96	129.72	640.76	1.13	771.62
1996-97	125.09	688.60	1.05	814.75
1997-98	125.89	805.42	1.80	933.11
1998-99	129.35	852.06	1.68	983.09

Source: Tasmanian Gaming Commission (2000), *Australian Gambling Statistics 1973-74 to 1998-99*, Centre for Regional Economic Analysis, University of Tasmania.

Data on Victorian gaming expenditure by form of gaming for the period 1973-74 to 1998-99 is shown in Table 2.7. This table indicates that expenditure on gaming machines has accounted for the largest amount of gaming expenditure since their introduction to Victorian clubs and hotels in 1992.

**Table 2.7: Victoria—Gaming expenditure**

Year	Lotteries \$m	Lotto \$m	Instant lottery \$m	Pools \$m	Casino \$m	Minor gaming \$m	Keno \$m	Gaming machines \$m
1973-74	6.320	13.400	-	-	-	-	-	-
1974-75	6.040	27.440	-	3.018	-	-	-	-
1975-76	5.560	45.560	-	3.664	-	-	-	-
1976-77	4.800	48.760	-	3.095	-	-	-	-
1977-78	3.840	83.960	-	3.050	-	6.608	-	-
1978-79	4.240	99.080	-	4.046	-	14.726	-	-
1979-80	3.280	110.880	-	5.170	-	20.336	-	-
1980-81	3.720	118.760	-	4.169	-	26.275	-	-
1981-82	4.640	124.600	24.660	2.373	-	31.857	-	-
1982-83	2.836	127.501	25.908	4.832	-	36.200	-	-
1983-84	2.935	150.166	25.912	4.017	-	50.992	-	-
1984-85	8.014	172.898	21.518	3.401	-	54.180	-	-
1985-86	9.024	160.367	19.614	11.567	-	63.838	-	-
1986-87	9.390	189.939	18.950	10.076	-	65.518	-	-
1987-88	8.775	211.448	20.588	6.922	-	78.976	-	-
1988-89	5.513	223.965	24.322	4.317	-	89.515	-	-
1989-90	6.170	258.028	41.454	3.762	-	107.595	-	-
1990-91	5.261	268.228	45.793	2.715	-	126.982	-	8.924
1991-92	4.997	277.855	40.511	2.126	-	141.840	-	32.463
1992-93	5.156	257.240	43.576	1.871	-	135.020	-	257.243
1993-94	5.036	254.920	41.086	2.166	-	113.721	2.473	679.663
1994-95	4.947	271.112	33.504	1.502	357.847	113.336	12.374	908.146

1995-96	4.995	281.10 2	28.970	1.765	490.90 0	51.365	8.702	1,246.3 09
1996-97	4.911	257.56 4	24.177	1.329	578.96 6	-	7.159	1,455.7 97
1997-98	5.214	268.81 5	23.670	1.244	742.29 2	-	7.084	1,711.2 90
1998-99	5.422	282.06 7	23.814	1.256	721.85 2	-	7.197	1,954.1 92

Source: Tasmanian Gaming Commission (2000), *Australian Gambling Statistics 1973-74 to 1998-99*, Centre for Regional Economic Analysis, University of Tasmania.

### State government revenue from gambling taxes

In the 1999-2000 Victorian State Budget, estimated gambling taxes comprised approximately 16 per cent of the State Government's revenue from taxes and charges. Table 2.8 indicates the relationship of gambling taxation to total Government revenue in the periods 1991-92 to 1999-00.

<b>Table 2.8 Gambling revenue as a proportion of total revenue 1991-2000</b>									
	1991-92 <sup>1</sup> \$m	1992-93 <sup>1</sup> \$m	1993-94 <sup>1</sup> \$m	1993-94 <sup>1</sup> \$m	1995-96 <sup>1</sup> \$m	1996-97 <sup>2</sup> \$m	1997-98 <sup>2</sup> \$m	1998-99 \$m	1999-00 \$m
Total gambling revenue	513.2	600.3	760.8	907.7	1051.3	1157.0	1296.0	1395.9	1428.2
Total taxes, fees and fines	5777.7	6302.0	7184.1	7553.8	8398.5	NA <sup>4</sup>	NA <sup>4</sup>	8842.9	8937.6
Total revenue and grants (excluding privatisation)	11735.9	1235.9	13645.6	14143.7	14941.0	NA <sup>4</sup>	NA <sup>4</sup>	19655.0	19489.6
Gambling revenue as per cent of total taxes, fees and fines	8.88	8.88	10.59	12.05	12.52	NA <sup>4</sup>	NA <sup>4</sup>	15.79	15.98
Gambling revenue and grants	4.37	4.37	5.58	6.42	7.04	NA <sup>4</sup>	NA <sup>4</sup>	7.10	7.33

Notes:<sup>1</sup>Exact figures from Victorian Budget Papers 1991-92 to 1996-97

<sup>2</sup>Exact figures from Taxation Revenue 1997-98 ABS Cat no 5506.0

<sup>3</sup>Estimates from Victorian Budget Papers 1999-2000

<sup>4</sup>NA: Comparable figures not available because of changes to accounting and reporting procedures

Source: Maddern & Malkiewicz (1999), *Hotel and Club Industry Gaming Impact Study*, VCGA, Melbourne, p.127

Table 2.9 details the amount of direct taxation revenue received in Victoria from each gambling activity during the period 1991-92 to 1999-2000. It clearly indicates the

changing balance of gambling revenue over that period. Table 2.10 gives the percentage breakdown of these figures.

**Table 2.9: Direct state government taxation – gambling industry (\$million) – 1991–2000**

Gaming product	1991	1992	1993	1994	1995	1996	1997	1998	1999
	1992 <sub>1</sub>	1993 <sub>1</sub>	1994 <sub>1</sub>	1995 <sub>1</sub>	1996 <sub>1</sub>	1997 <sub>2</sub>	1998 <sub>2</sub>	1999 <sub>3</sub>	2000 <sub>3</sub>
Electronic gaming machines	0.2	94.9	258.8	384.0	509.1	626	704	806.0	843.0
Casino	0.0	0.0	0.0	67.8	110.4	128	175	156.1	145.0
Racing	191.6	198.4	201.7	144.1	122.0	121	127	135.3	139.0
Lotteries	300.2	290.2	286.1	296.6	297.9	277	286	294.7	296.3
Other – including bingo, raffles	21.2	16.8	14.2	15.2	11.9	5	4	3.7	4
Total	513.2	600.3	760.8	907.7	1051. <sub>3</sub>	1157	1295. <sub>9</sub>	1395. <sub>9</sub>	1428. <sub>2</sub>

Notes:<sup>1</sup>Exact figures from Victorian Budget Papers 1991-92 to 1996-97

<sup>2</sup>Exact figures from Taxation Revenue 1997-98 ABS Cat no 5506.0

<sup>3</sup>Estimates from Victorian Budget Papers 1999-2000

Source: Maddern & Malkiewicz (1999), *Hotel and Club Industry Gaming Impact Study*, VCGA, Melbourne, p.127

**Table 2.10: Direct state government taxation (as per cent breakdown) – gambling industry (\$million) 1991–2000**

Gaming product	1991	1992	1993	1994	1995	1996	1997	1998	1999
	1992 <sub>1</sub>	1993 <sub>1</sub>	1994 <sub>1</sub>	1995 <sub>1</sub>	1996 <sub>1</sub>	1997 <sub>2</sub>	1998 <sub>2</sub>	1999 <sub>3</sub>	2000 <sub>3</sub>
Electronic gaming machines	0.04	15.81	34.02	42.30	48.30	54.11	54.32	57.75	59.03
Casino	0.00	0.00	0.00	7.47	10.50	11.06	13.50	11.18	10.15
Racing	37.33	33.05	26.51	15.88	11.60	9.80	9.80	9.69	9.80
Lotteries	58.50	48.34	37.61	32.68	28.34	22.07	22.07	21.11	20.75
Other – including bingo, raffles	4.13	2.80	1.87	1.67	1.13	0.43	0.31	0.27	0.28
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0	0	0	0	0	0	0	0	0

Notes:<sup>1</sup>Exact figures from Victorian Budget Papers 1991-92 to 1996-97

<sup>2</sup>Exact figures from Taxation Revenue 1997-98 ABS Cat no 5506.0

<sup>3</sup>Estimates from Victorian Budget Papers 1999-2000

Source: Maddern & Malkiewicz (1999), *Hotel and Club Industry Gaming Impact Study*, VCGA, Melbourne, p.127

These tables show that in Victoria there has been significant growth in taxation from the newer forms of gambling (ie. electronic gaming machines and the Casino), while taxation revenue from traditional gambling forms has declined. More detail on how the various taxes for each gambling activity are derived in Victoria is provided in Appendix D.

### ***Number of machine gaming sites and gaming machines***

Electronic gaming machines (EGMs) are now available in casinos, clubs and hotels throughout Australia, except in Western Australia where they are restricted to the Perth Burswood Resort Casino. Table 2.11 shows the distribution of EGMs by Australian state and territory and venue type in 1999 as cited by the Productivity Commission (1999). The large number of EGMs in New South Wales compared with other states and territories reflects the relative maturity of this market (ie. EGMs were introduced to licensed clubs in New South Wales in 1956). Appendix E presents time-series data on the distribution of EGMs in Victoria by local government area from 1992 to 1999.

**Table 2.11: Distribution of EGMs by state and territory and venue type**

Venue	Vic	NSW	Qld	SA	WA	Tas	ACT	NT	Total
Clubs	13.69 1	72.42 9	17.54 4	1.446	NA	221	4.865	456	110.652
Hotels	13.61 3	23.96 1	9.783	10.38 6	NA	1.095	60	132	59.030
Casinos	2.500	1.500	3.121	716	1.12 5	1.041	NA	607	10.610
Total	29.80 4	97.89 0	30.44 8	12.54 8	1.12 5	2.399	4.925	1.195	180.333

Source: Productivity Commission 1999, *Australia's Gambling Industries*, Report No. 10, AusInfo, Canberra.

As discussed in detail in subsequent sections of this report, several conceptual and methodological factors require that caution be employed when using the descriptive statistics presented in this section as indicators of gambling and gaming impacts. For example, these factors include that:

- Per capita expenditure figures have a tendency to inflate expenditure data for the general population. That is, per capita data incorrectly implies that all members of a given population spend money on forms of gambling.
- The method used to collect gambling participation data will influence the overall rates found (eg. life time versus past year participation estimates).

In particular, Section 5 of this report provides a critique of measures used to indicate gaming impacts.