

Community Impacts of Electronic Gaming Machine Gambling

Part B

FINAL REPORT

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Chapter One

Overall Research Methodology

This chapter provides a brief outline of the three important phases of the methodology and approach to undertaking this study. The first phase involved a detailed literature review to decide upon an appropriate theoretical approach to the research task, including a review of previous social and community impact studies and the way in which they were applied. Significant consultation and feedback occurred around this phase of the study. The second phase, having satisfied the terms of reference (in terms of an agreed approach and the preferences of the Research Panel) was to design a methodology to select regions within the two States and to provide a justification for the selection of those regions.

The third phase is described as “people and their communities” to indicate the data collection, surveys, interviews with local councils, service providers, business interests and consultations with key stakeholders. Data collections were wide ranging including gambling statistics, population and demography, economic and social profiles of the regions and administrative data compiled on the regions by other agencies. Both quantitative and qualitative information was collected. This stage included a number of surveys — of the general population, gambling counselling service providers, financial counsellors, local GPs and others. Because of some difficulties encountered in gathering systematic and reliable data items at the regional level, particularly those that were comparable across the respective communities, the researchers expanded the number of surveys and interviews originally planned to be conducted. A key component was to establish the different gambling environments and the assessment of the impact of the different gambling environments.

An important component of this study involved the researchers preparing a discussion paper on the overall project — Community Impact of Electronic Gambling Machine Gambling: Discussion Paper 1: Review of Literature and Potential Indicators, which was used by research staff to consult with stakeholders, researchers and others to seek feedback on the project. The purpose of the discussion paper was to evaluate which community impacts may potentially be correlated with EGM gambling. That paper provided an overview of the methodology, a literature review summarising social and community impacts of gambling, identified some of the indicators and data items for measuring community impacts and sought feedback from stakeholders. The Centre received 10 written responses, 5 emailed responses and 4 verbal (telephone) responses to the discussion paper, all of which was immensely helpful.

1.1 Approach to Research Task

The following discussion outlines the approach to the research task, the original research design as adjusted based on peer review comments, a review of previous studies (some of which were considered in Part A: Chapter 11), the selection of regions and research tasks. A combination of both quantitative and qualitative research techniques were employed in the study, special surveys were undertaken

and in some special cases, interviews/consultations were conducted, designed to overcome the limitations of data encountered during the course of the research.

1.1.1 Theory on Research Design

The fundamental objective of any public policy evaluation is to assess the impacts of a policy change or programme. Two pieces of information are essential to make such an assessment: what happened to the outcomes of interest for a population under the influence of the programme (“the factual”); and what outcomes would have transpired for that population had the programme not existed or existed in some other form (“the counterfactual”). Neither piece of information is more important than the other; the accuracy of the impact assessment depends equally on the factual and the counterfactual.

The collection of data for a counterfactual is typically more difficult than for the factual, the reason for this being that the counterfactual is a hypothetical situation which cannot actually be observed. One needs to hypothesise about its nature. In contrast, the outcomes for the factual can be measured, for instance by use of surveys, although there may still be significant costs of doing so.

There are three general approaches to modelling a counterfactual, each having fundamental implications for evaluation design, which are considered in turn below (the following discussion draws on Grossman, 1994; Heckman and Smith 1995; Moffitt and Ver Ploeg, 1999; and Bryson, Dawson and Purdon 2002).

1.1.2 Experimental Designs

Experimental designs involve the random assignment of individuals to either a treatment group or a control group. Individuals in the ‘treatment’ group are offered the programme while those in the control group are not. Outcomes for the two groups are then compared, with the control group being used to represent the counterfactual scenario. This treatment is likely to be reasonable so long as:

- the sample sizes for the treatment and control are large enough to support robust statistical analysis;
- there are no biases in the assignment; and
- the outcomes for the treatment and control groups are not influenced by each other.

Random assignment approaches are generally agreed in principle to be the best approach to evaluation, but sometimes they will not be possible, for instance because equity considerations require that programme access be universal or because there are unavoidable biases in the selections into the treatment and control groups. In addition, random assignment approaches often take it for granted that a random assignment has actually been achieved, when this is not always the case. Finally, there are also potential equity concerns with the use of an experimental design, particularly for the evaluation of social policy, in that by assigning an individual to a control group you are potentially denying them access to a programme that would assist them.

1.1.3 Matched Comparisons

Matched comparisons involve the selection of a comparison group with a similar composition to the treatment group. The key point of distinction is that there is not random assignment to the two groups, and it is therefore possible that differences in outcomes for the two groups will arise from non-programme influences, thus contaminating the evidence regarding the programme impact. This *quasi-experimental* procedure introduces a degree of subjectivity, in that the evaluator needs to choose what is a suitable similar group for use as control, and to this extent is less reliable than a pure *experimental* approach. However, analysts of social programmes are often forced to use analysis of this type, and a large amount of work has been carried out to identify how matched comparisons may best be implemented. Even though analysts are forced to use non-randomised treatment and control groups, they can use model specifications which make allowance for these differences and use statistical tests to reject specifications which do so inadequately. While there will always be a degree of subjectivity in the choice of control, it may still be possible to use inference techniques to make an objective rejection of some candidates (in this case some regions) for the comparison group.

1.1.4 Before-and-After Comparisons

Before-and-after comparisons use a 'treatment' group's (or in this case a treatment region's) pre-treatment characteristics as a control group. The main problem with such an approach is that the outcomes of the policy change may differ from earlier outcomes because of factors other than the policy change. For instance, the experience of a group of unemployed under a new programme will be affected by the business cycle, changes in personal characteristics which are unrelated to the new programme (e.g., lifecycle effects), changes in the institutional environment which are separate to the programme, and the programme itself. In practice it can be very difficult satisfactorily to strip out these other influences. The task is made easier where there are observations for a substantial number of time periods in the pre- and post-treatment analysis. In some instances it is possible to select a panel across a cross-section of the relevant non-treatment influences (e.g. regional income, machine and venue density), and let the panel data speak about the impact of those factors. Moffitt and Ver Ploeg (1999) say of the before-and-after evaluation method that:

A before-and-after design uses roughly the same data strategy as a monitoring study, namely, the collection of data on outcomes before and after a policy change. However, in a before-and-after design the family and individual outcomes in the "after" phase are intended to be causally related to the policy. A design of this type can be distinguished from a monitoring study if it includes a strong analysis of the influence of alternative, simultaneously occurring forces, such as social and economic trends (e.g., changes in the unemployment rate) that may have been contributing to the trends in outcomes as well as policy. (Because this separation of policy effects and the effects of other forces is so difficult, before-and-after designs are one of the least desirable types of evaluation methodologies ...) [p. 20, emphasis added]

In the case of this study, the Gambling Research Panel has chosen to adopt a matched comparison approach.

1.1.5 Incorporating Comments from the Peer Review Process

The Australian Gaming Council referred the researcher's discussion paper to Professor Jeff Borland, Head of Economics at the University of Melbourne. We record our appreciation of this. The researchers also submitted the discussion paper to several independent peer reviewers and received helpful comments in return. In particular though, we acknowledge the comments of Professor Borland who while acknowledging the practical reasons for employing a matched comparison approach (as a quasi-experimental evaluation method) noted a series of improvements. For example, he noted that it was unlikely that the researchers would be able to obtain the full set of characteristics that might affect the outcome measures. We explain in the methodology here in Section 1.5 that the set of explanatory variables used were able to predict 80 per cent of the variation in expenditure for regions, but notwithstanding, we encountered some data limitations that did restrict regional comparisons, individual behaviours and gambling preferences. The method used was not a simple "propensity scoring" methodology to choose individual matched regions. Quite a number of other activities were involved in selecting the regions (i.e., not just regression analysis) including *inter alia*, visits to the prospective regions, discussions with stakeholders and an assessment of the potential for equivalent venues in the regions in Western Australia. We note that in some cases it was not possible to control for all of the differences between communities in determinants of gambling expenditure. However, we have been able to add to the research methodology by examining the evolution of social outcomes over time since EGMs were introduced (and the impact of the casinos at different points in time). This involved examining the baseline and then the "difference in the difference" approach suggested by Professor Borland following the policy change. For example, what happened to wagering in the respective States following the establishment of the casino, what was the experience in regard to lottery sales? We note on this last point, that Tattersall's did not assist the researchers in ways we believe it could have, while still ensuring confidentiality as it sought to list on the ASX. This type of constraint also illustrated Professor Borland's point—"in general it is likely to be difficult to obtain data on that full set of characteristics" or behaviours (in this case, expenditure on similar products). Any criticisms by the industry, in the absence of assistance to the researchers, should be rather muted.

In some cases, we concentrate our analysis at the State level rather than the regional level, being constrained by the availability of data. We adopted several suggestions to compare regions in Victoria with New South Wales on several data items such as Medicare claims and reports by general practitioners to gauge the extent of change in Victorian communities. In several cases, outcome variables such as from ABS data could not be used, as at the "unit-record" file level there were few observations or the data was subject to confidentiality restrictions. In all cases, a 'second-best' administrative data set was sought. We believe that several not-for-profit welfare agencies should be financially assisted to improve their data collection and records. Currently, it is not possible for agencies to do this as they are not properly funded yet such agencies are often at the 'coal-face' in helping to ameliorate individual and family impacts (i.e., emergency financial relief, food vouchers, family counselling, housing assistance).

Time series data on gambling expenditure is very good and this data does enable 'before and after' effects of policy changes to be identified.

1.2 Previous Social/Community Impact Studies

There are three broad approaches to estimating community/social impacts of gambling that have been adopted in the literature.

One approach is to extrapolate out total impacts from estimated prevalence rates of problem gambling and studies on the probabilities of various impacts that can result from problem gambling. The estimates of the social costs of gambling included in the Productivity Commission's report 'Australia's Gambling Industries' are a recent Australian example of this approach. Studies extrapolating results from broad prevalence studies face two key limitations, being reliant on the accuracy of prevalence studies, and on the accuracy of the impact frequency estimates used. The latter issue is likely to be of more concern, as the experiences of those problem gamblers who do *not* seek treatment are only poorly understood.

The second approach is to seek information on community attitudes relating to the social impacts of gambling. This approach is based on the assumption that "the most important driver of community perceptions [is] the lived experiences of residents and stakeholders within the relevant community" (Masterman-Smith and McMillen, p. 56). There are three significant difficulties with this approach. First, it can be extremely difficult to ascertain that the survey respondents (or focus group participants) mean the same thing as the researchers, consequently it is impossible to be confident that consistent phenomena are being measured. Second, community attitudes do not necessarily reflect "lived experience" but instead can reflect the coverage of an issue in the media. For example, in debates on extending the voting franchise to women a number of MPs and public figures expressed concerns that women would not be able to use the vote 'responsibly'. It would be hard to sustain the argument that this accurately reflected the 'lived experiences' of the individuals concerned, rather than unfounded prejudices. Finally, where this qualitative information on community attitudes is obtained from focus groups, it is unlikely to be statistically robust, that is to say there is no way of knowing whether the focus group used accurately reflects the community as a whole.

The third approach is to undertake statistical analysis comparing regions with and without ready access to the form of gambling in question. This analysis allows the researcher to test whether there is a robust difference between the regions in factors of interest, such as bankruptcy, suicide etc., after allowing for other regional differences. Few studies of this type have been undertaken on problem gambling, however it is commonly used in other areas of economic and social impact analysis. A study of this type was recently undertaken in the US (Stitt et al., 2001, summarised below) comparing regions with and without access to casinos. Where possible the researchers chose this latter approach for this particular research brief.

One important study examining community impacts was that by Stitt et al., (1999), 'Effects of Casino Gambling on Crime and Quality of Life in New Casino Jurisdictions, Final Report'. The report attempted to find out how casino gambling affected crime and quality of life in jurisdictions where casinos have only recently been introduced. Eight communities were chosen to be part of the study. The communities ranged in population from 22,835 to 396,685.

The project had 3 stages:

- The first stage was for a research team to go to each of the chosen communities and collect a wide range of views from community leaders. Community leaders were asked why they thought casino gambling had been introduced into the community and their view on what impact the casino had on the community.
- The second stage was telephone surveys of several hundred residents of each community to obtain their views on the impact of the casino on the community and their opinions on how the casino affected day-to-day living within the community.
- The third stage was collecting official data to determine how the communities changed once casinos were introduced. Comparisons were also made between the casino communities and a number of matched control communities.

The 'control' communities were matched for economic, social, and demographic characteristics to the casino communities.

These are their findings comparing casino jurisdictions with controls:

1.2.1 Bankruptcy

They found that bankruptcy is influenced by the presence of a casino. They reported a significant increase in the rate of personal bankruptcy in five out of seven 'casino' communities. There was also a statistically insignificant increase in one of the other communities. It is interesting to note that the community where bankruptcy did not increase was the only one that could qualify as a "destination resort".

1.2.2 Suicide

They found that there was an increased suicide rate in six of the eight communities, however it was only statistically significant for two of the cases. They also found a decrease in two communities but only in one of these was there a statistically significant difference. A regression analysis suggested that the presence of a casino was associated with a statistically significant increase in per capita suicide.

1.2.3 Family Breakdown

They concluded that there was no direct relationship between divorce and casino gambling with their data. Their results were mixed. In half of the casino communities there was an increase or small decrease of divorce compared to their control communities, in the other half divorce rates actually decreased compared to their control communities.

1.2.4 Crime

They reported that there was no conclusive evidence either way regarding the effect of the presence of casinos on crime. The data indicated that minor crimes are more likely to

increase in casino communities than are the index (or serious) offences, although there was little consistency in types of crimes recorded. The focus of the study and others in the US context are at least partially concerned with monitoring whether street crime has increased in the vicinity of casinos while Australian studies tend to focus on crimes that are the result of the need to finance problem gambling. In Australia, the location of EGMs in hotels and clubs and their concentrations in local communities is quite different to overseas experience where in general, machines are either confined to casinos or a single destination site.

1.3 Approach Taken

As discussed in the introduction, the aim of this project is to increase the existing body of knowledge as to the Community Impacts of electronic gaming machine gambling. Given the nature of the public policy being assessed it is obviously not possible to adopt a truly experimental control. Instead the approach taken is to compare selected regions in Victoria with similar regions in Western Australia (a matched comparison approach). In other words, the counterfactual in this case is represented by the trends in various social indicators exhibited in the Western Australian regions.

Obviously a significant constraint in developing the project methodology was the relatively limited number of regions in Australia. Studies in the US that have followed this approach have had literally thousands of 'counties' from which to choose their regions, whereas there are only a relatively small number of council regions in Victoria and in Western Australia from which to choose. Despite this limitation it is still believed that a matched comparison group analysis has a greater chance of identifying potential community impacts than a "before and after comparison" limited to Victoria as there have been significant changes since the introduction of electronic gaming machines such as movements in the economic cycle, changes in interest rates, taxation arrangements etc., which would be likely to disguise any impact of the gaming machines themselves. Whilst there are still differences between Victoria and Western Australia, the trends over time are likely to be relatively similar.

It is still possible however, that the research results will be confounded by unobservable differences between the Victorian and Western Australian regions.

1.4 Selection of Regions

The selection of the regions in Victoria was undertaken by the GRP. The two Melbourne metropolitan regions were chosen to have quite different constituents, but sharing a high level of electronic gaming machine usage. By choosing areas in which more of the population uses electronic gaming machines, differences between Victorian regions and similar Western Australian regions should be more apparent.

The two Melbourne metropolitan areas chosen were the City of Maribyrnong and the City of Wyndham. Maribyrnong is an inner city suburb just west of Melbourne; Wyndham is on the outer edge of metropolitan Melbourne, 30 kilometres south-west of Melbourne and 35 kilometres north-east of Geelong. In 2002-03, net expenditure on gaming in Maribyrnong totalled \$58.2 million, or \$1,085 per resident adult. In the same

year, net gaming expenditure in Wyndham was \$57.2 million, or \$911 per resident adult. This compares to a Victorian average gaming expenditure of \$624 per adult. Gaming venues are well spread through Maribyrnong, but in Wyndham they are clustered close to the main highway linking Melbourne and Geelong. The latter suggests it may be worth investigating the extent of expenditure in Wyndham by non-residents.

Regions in regional Victoria were selected by the GRP with similar criteria in mind. The two non-metropolitan regions selected were Greater Shepparton and Warrnambool. The City of Greater Shepparton is located in the Goulburn Valley and centred on the city of Shepparton which is the fourth largest provincial centre in Victoria. The boundaries of the council extend into the surrounding rural areas, covering an area of 2,422 square kilometres. In 2002-03 net gaming expenditure per adult was \$596, below the Victorian average, but above average for non-metropolitan Victoria. The City of Warrnambool is Victoria's largest coastal City outside of Port Phillip Bay and is located 263 kilometres from Melbourne. Net gaming expenditure in Warrnambool for 2002-03 averaged \$734 per adult, significantly above the Victorian average.

1.5 Methodology

The purpose of the evaluation design was to identify regions in Western Australia that were as similar as possible to the Victorian regions on the key factors of interest. Obviously because a multitude of regional data exists, there are any number of factors that could be used to identify these matching regions. In this case, because the key factor of interest is potential electronic gaming machine expenditure, we were interested in matching regions on those factors most closely related to gaming expenditure. The most important criteria we looked at in choosing regions was the extent to which, were hotel and club based EGMs to be legalised in WA, expenditure in the Western Australian local government areas would match that of our four Victorian regions.

A linear regression was undertaken of EGM expenditure in Victorian local government areas on demographic characteristics including household income, age distribution and the prevalence of aged pensions and other welfare recipients, marriage, rental properties, lone parents and an indicator for whether the region was part of the capital city metropolitan area. This identified those factors that in Victoria were correlated with EGM expenditure, and provided coefficients that indicated the scale of the impact.

Demographic data relating to population, age distribution, personal and household income distributions, education, indigenous status, marital status and housing type were sourced from the 2001 Census of Population and Housing. Additionally, social security support data was sourced from Centrelink. These data were aggregated from postcode to local government area level. For Victoria, data on numbers of electronic gaming machines and gaming machine revenue by local government area were sourced from the Victorian Casino and Gaming Authority.

Due to the provisions of the Gaming Machine Control Act (1991) regarding release of data, information on Net Gaming Expenditure can only be supplied by the Victorian Office of Gambling Regulation at the local government region level. Not all of Victoria's local government regions were included in the analysis, as the following regions contained no venues with electronic gaming machines located in them:

- Shire of Buloke;
- Shire of Gannawarra;
- Shire of Golden Plains;
- Shire of Hindmarsh;
- Shire of Indigo;
- Shire of Loddon;
- Shire of Moyne;
- Shire of Pyrenees;
- Shire of West Wimmera; and
- Shire of Yarriambiack.

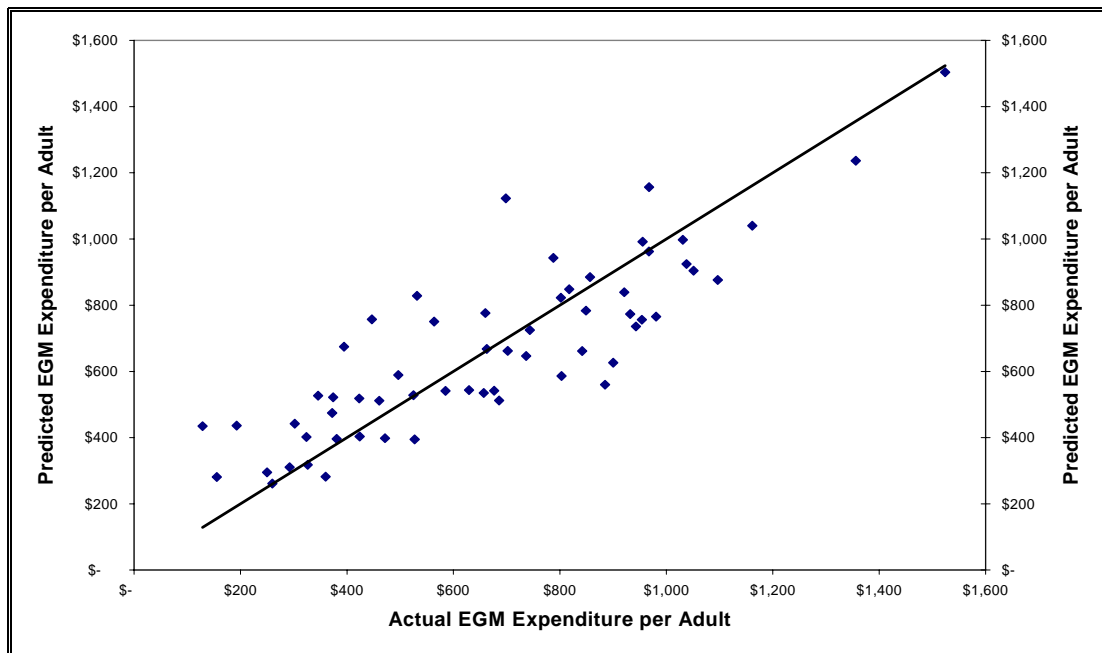
Even at the local government region level, data can only be released where the local government region contains more than three venues licensed with electronic gaming machines. Consequently the following regions could not be included in the analysis as the OGR only releases their data aggregated with one or more neighbouring regions:

- Alpine Shire;
- Borough of Queenscliffe;
- City of Moorabool;
- Rural City of Ararat;
- Shire of Central Goldfields;
- Shire of Corangamite;
- Shire of Moira;
- Shire of Mount Alexander;
- Shire of Murrindindi;
- Shire of Southern Grampians;
- Shire of Strathbogie;
- Shire of Towong; and
- Surf Coast Shire.

Figure 1.1 shows the fit of the Victorian data to the regression, showing that a considerable proportion of the variation in EGM expenditure between local government areas can be explained by the variables we included in the regression (an observation on the 45 degree line shown represents a perfect fit to the data).

In terms of applying these coefficients to Western Australia data this means that they represent the factors which would be correlated with net gaming revenue in Western Australia, were electronic gaming machines legalised outside of Burswood Casino, and were the regulatory environment (including machine ownership and relative freedom to transfer between regions and venues) in Western Australia identical to Victoria. Despite this limitation, the results of the analysis still provide a good basis for comparing regions for similarities in the areas of interest.

Figure 1.1
Results of Regression Analysis: Actual and Predicted EGM Expenditure per Adult



Source: SACES calculations.

The regions were matched on the basis of a wide range of demographic, geographical and economic data. As a part of this process, we estimated the level of EGM expenditure in Victorian LGAs in 2001-02 by regression analysis, where the set of explanatory variables used was the:

- percentage of the adult population that was married;
- percentage of households renting from the housing trust;
- percentage of parents that were lone parents;
- percentage of the population aged 20 years or over that were between 20 and 40 years;
- percentage of the population aged 20 years or over that were between 40 and 60 years old;
- the percentage of households with income in certain categories, as determined by the available census data;
- percentage of the population aged 60 years and over receiving an aged pension;
- percentage of the adult population receiving other benefits administered by Centrelink; and
- a dummy variable to indicate the region was within the Melbourne metropolitan area.

Collectively, these variables were able to predict almost 80 per cent of the variation in EGM expenditure across LGAs in Victoria.

This equation was then used to ‘predict’ a likely level of EGM expenditure in regions in Western Australia where EGMs were to be introduced in that state. Importantly, these predictions assume that demographic characteristics would affect the demand for gambling, EGM numbers, and the extent of gambling expenditure in the same way that these characteristics affect gambling in Victoria. Table 1.1 shows the actual EGM expenditure in the Victorian LGAs and the EGM expenditure predicted by this equation.

Importantly, this equation was used as a filter to identify a small number of regions in Western Australia that could potentially have similar gambling behaviour to the chosen regions in Victoria. It was not used in a simple ‘propensity scoring’ methodology to choose individual matched regions. Advantages of that methodology include its relative simplicity and the appearance of disinterest of the researcher in the choice of regions (though in practice the weights assigned to demographic data may be chosen arbitrarily by the researcher). In this case, we chose to compare more closely the small number of Western Australian regions with each of the chosen regions in Victoria, taking into account factors such as distance from the capital city, size of the population and key industries in the region. Matches for Greater Shepparton and Warrnambool were particularly difficult given the limited number of sizable regional cities in Western Australia. Further, before making a final choice of regions, members of the research team visited a number of the candidate matching regions in Western Australia and spoke with members of the communities. It is important to stress that the regression analysis was only ‘one filter’ in the decision process to achieve the final selection of regions. Considerable desk top analysis and visitation to the regions, including discussions with councils and others was undertaken before the final selection of regions was confirmed.

Table 1.1
Predictions from Regression Equation

Victorian Local Government Area	2001-02 EGM Expenditure (\$ per adult)		Western Australian Local Government Area	2001-02 EGM Expenditure (\$ per adult)
	Actual	Predicted		Predicted
Wyndham	1,051	904	Cockburn	920
Maribyrnong	1,356	1,236	Belmont	1,216
Greater Shepparton	702	662	Albany	667
Warrnambool	885	560	Geraldton	831

Source: SACES calculations.

In the regression analysis, the researchers sought to control for a range of characteristics that would affect our causal factor of interest, EGM expenditure, were EGMs to be introduced into WA. At the time the regions were chosen, we did not possess indicators of the range of social issues, the level of gaming expenditure on available products, or extent of social participation in the regions that were to be analysed. Importantly, this ensured that the regions were not chosen on the basis of these observed social outcomes, but these data limitations also meant that we could not specifically identify those demographic factors that were important determinants of key social outcomes. As Prof. Borland points out, controlling for some differences in determinants of gambling expenditure between the communities in Western Australian and Victoria may not also sufficiently control for all of the differences between the communities in Western Australia and Victoria that would affect the social outcomes we are studying. For this

reason, in comparing social outcomes between the regions it will be difficult to infer that observed differences are due to the difference in EGM expenditure, rather than persistent cultural and socio-economic differences between the regions.

Stronger inferences may be able to be drawn from studying the evolution of these social outcomes over time since the introduction of EGMs in Victoria. For example, were there observed changes in the rate of problem gambling, of crime, and health impacts after EGMs were introduced relative to the different rates of reporting prior to this policy change. As Professor Borland described:

“An alternative approach that would overcome the problems with the matching method does seem possible. This is what is known as the ‘difference-in-difference’ method. This approach estimates a policy effect as the difference in outcomes between a treatment group and control group in a time period after a policy has been introduced (where the treatment group is affected by the policy and the control group is not affected), minus the difference in outcomes between the same treatment and control groups in the period before the policy is introduced.

In the proposed analysis of the community impact of EGMs, the post-policy change period would be after the introduction of EGMs in Victoria, and the pre-policy change period would be prior to the introduction of EGMs in Victoria. The difference-in-difference estimate of the effect of EGMs is therefore the difference in outcomes between Victoria and Western Australia after introduction of EGMs in Victoria, minus the difference in outcomes prior to the introduction of EGMs. Hence, the advantage of this approach is that it effectively controls for differences in the outcome measure that exist between the treatment and control groups in the absence of the policy”.

In applying this methodology to assess the impact, if any, of EGM expenditure on selected social outcomes it would not be appropriate to only compare these outcomes immediately before and immediately after the introduction of EGMs. Unlike the labour market interventions analysed in the studies cited by Prof. Borland, the impact of EGM gaming on the community, following the introduction of EGMs, could be expected to be spread over an extended period of time. In all States that have introduced EGMs, the level of expenditure has been relatively modest in the first year or two but has grown steadily. Also, evidence suggests that individual spells of problem gambling often last for years before coming to a head (there was a discussion of this in the original literature review). With these lags in mind, ideally we would like to study the evolution of these social outcomes at regular intervals since EGMs were introduced and compare these with growth in EGM expenditure. If need be, given data limitations, even comparing outcomes between two periods in which EGMs were in place in Victoria, e.g. between say 1995 and 2000, would shed light on the effect of EGM expenditure on social outcomes because the level of EGM expenditure increased so markedly over that period.

Nevertheless, in applying this methodology it remains necessary to bear in mind that other determinants of social outcomes — such as the changing demographic characteristics and economic success of the regions, and access to other forms of gambling (particularly casino gambling) — differ between regions and changes in EGM expenditure may well not be the main determinant of changes in social outcomes.

1.6 Results

By multiplying data for each of the Western Australian regions by each of the statistically significant coefficients identified in the analysis of Victorian data, we were able to make predictions as to what the per adult net gaming expenditure in each local government area of Perth would have been had they experienced Victoria's gaming environment. Obviously, the validity of these predictions is limited to the extent that there are cultural differences between the residents of Victoria and Western Australia. Nevertheless, the predictions provide, in a single number, an index of demographic variables relevant to the determination of electronic gaming machine usage, which was used to start filtering the available regions.

This list of Western Australia regions by "predicted" net expenditure was then compared with the four Victorian regions of interest, with the closeness of this predicted level of expenditure being the most significant factor in selecting the appropriate match. Regions were also compared on a range of other intangible factors such as the nature of the region, proximity to casinos etc.

Three towns in Victoria (defined on the basis of postcode areas) were also identified by the GRP, and were matched with similar regions in Western Australia on the basis of qualitative evaluations of regional similarities, and an analysis of some Census data. These regions were included in the qualitative research undertaken as part of this project, but were not included in the data analysis, as none of the data is available at the post code level.

The final matched comparison regions in the two States are set out below.

	Victoria	Western Australia
LGA (4)		
Metropolitan (2)	Wyndham Maribyrnong	Cockburn Belmont
Non-Metropolitan (2)	Greater Shepparton Warrnambool	Albany Geraldton
Postcode (3)	Bairnsdale (3875) Hastings (3915) Warburton (3799)	Busselton (6280) Kwinana (6167) Mundaring (6073)

The methodology for collecting information and data to provide a descriptive profile of the regions involved several stages including desktop research, visits to the regions and interviews with key stakeholders, a survey of the general population, surveys of service providers and interviews/consultations.

1.7 The People and Communities

1.7.1 Desktop research

The first stage in the process of collecting information about the people and communities was a desktop search of local council and significant community organisations' websites for information on key features of the local community. This provided focus for data collection and consultation with councils, as well as indicating other key stakeholders in each region.

1.7.2 Data collection

In order to be able to comment on and compare the people and communities of the selected matched regions, a wide range of data sources were collected and explored. For a comparison of the States, a range of Australian Bureau of Statistics (ABS) publications were used. Data on population trends assisted in explaining pressures on regions through population growth and how interstate migration contributed to the composition of the State's people. Data on employment growth, unemployment and youth unemployment rates, employment by industry as well as Gross State Product (GSP) and wages growth contributed to the discussion of the local economies.

The ABS's community profiles (derived from five-yearly Census data) provided an additional wealth of information on the smaller communities including both the local government areas and postcodes. Community profile data were used to describe the local economy — unemployment, employment by industry, employment by occupation — and the people — age distribution, country of birth, income distribution and household tenure type. Community profile data also provided limited information on marital status, educational attainment and the indigenous proportion of each population. Australian Taxation Office statistics were used to describe the trend in mean taxable income by region over time.

1.7.3 Survey of residents

In order to find out local residents' opinions of their local community and their recreation and leisure activities, the Centre conducted a mail out survey of over 7,000 households in the selected regions. The survey was designed to be as simple as possible to complete (bearing in mind possible language and comprehension difficulties) including mostly discrete response and very few descriptive response questions.

The sample of households was randomly selected from publicly available data on the White Pages CD Rom. The Centre — in consultation with the GRP — determined the total number of households to be surveyed and the number of households then selected from each region was calculated as a proportion of the population (i.e., roughly one in every 30 households was surveyed in each region).

The survey was then distributed by the Centre with a covering letter to advise residents of the Centre's role and the aim of the study. Survey recipients were provided with a reply paid envelope to assist with return of the completed questionnaire and were able to contact the Centre for further information or with queries.

Throughout this process, the Centre liaised closely with local councils in the selected regions to ensure that they were kept up-to-date with progress on the development of the survey (and were given a chance to comment on the draft questionnaire) and were able to respond to any queries from residents should they arise.

Completed surveys were returned to the Centre for analysis.

1.7.4 Consultation with key stakeholders

An important stage in the collection of information involved visiting the selected regions and speaking with local council staff, community service organisations and other key stakeholders. Local council staff were able to provide additional insights into the demographic makeup of the region, other characteristics of the local residents, and key features of the local economy. Through these visits, we were able to gain a feel for the extent to which residents were actively involved in their local community, for example involvement in local sporting teams, attendance at religious services and popularity of local community groups.

1.8 The Gambling Environments

1.8.1 Desktop research

The researchers have undertaken a number of gambling studies in recent years developing a thorough knowledge of the gambling environment in Australia in general and in Victoria in particular. Notably, in undertaking its recent work on self exclusion programs, the South Australian Centre for Economic Studies research into Evaluating the Impact of Regional Caps and other harm minimisation measures in place around Australia, the researchers gained a good understanding of the different gambling environments in Victoria and Western Australia. For example, in the "Caps Study" the region of Maribyrnong Plus and parts of Wyndham were included as regions of interest. Much of this experience was drawn on to describe and analyse the different gambling environments in the various matched regions. In addition, literature on the history of gambling in Western Australia was reviewed to determine the traditional gambling industries and understand the timing of implementation and effects of various policies.

1.8.2 Data collection

The key data source used to describe the gambling environments in both Victoria and Western Australia was the Australian Gambling Statistics compiled by the Tasmanian Gaming Commission. This source provides time series data over a 25-year period which includes State data on total and per capita expenditure and turnover, as well as expenditure on each category of gambling activity. Data collected in the course of the Productivity Commission's inquiry into Australia's gambling industries was also analysed to describe the gambling environment.

At a regional level in Victoria, data from the Office of Gambling Regulation was used to describe the number of electronic gaming machine (EGM) venues and total number of EGMs by local government area.

Data on particular types of gambling activities was also collected separately from the key gambling bodies. The casinos (Crown in Victoria and Burswood in Western Australia) provided some financial data and numbers of games while the lottery bodies in the two States were also invited to provide information. LotteryWest were interviewed and supplied information to the research team. Tattersall's did not provide any information to assist the study.

1.8.3 Survey of residents

As well as seeking information on the recreation and leisure activities and attitude towards their local community, the Centre's mail out survey (described above) sought information on residents' involvement in and attitudes to gambling activities both in their local community and elsewhere. Residents were asked to provide information on how often they undertook various gambling activities (including attending the casino and placing a wager). They were also asked to indicate their attitudes towards gambling and the effects of these activities on the local community. The survey also included a section seeking the resident's views on the factors that should guide government decision making when it undertakes a review of gambling activities.

1.8.4 Consultation with key stakeholders

In visits to the selected regions, the researchers also undertook consultations with key stakeholders in State government agencies, the gambling industry, local government, Gambler's Help, industry bodies, welfare and community service providers and selected pawnbrokers. We also met with industry regulators, the OGR and other researchers within Universities. The Victorian Council of Social Services (VCOSS) kindly hosted a group forum with Gambler's Help staff from regional Victoria.

In Western Australia, researchers from the Centre met with staff at the Office of Racing, Gaming and Liquor to discuss the gambling industry in general and recent and future policy developments in the industry. Researchers visited the Burswood Casino and met with staff to discuss issues including accessibility to the casino, affects of various government policies on number of visitors and changes in the casino structure and environment over time. The Centre also met with LotteryWest to discuss the lottery/lotto industry in Western Australia and changes over time.

Through consultation with the key stakeholders, the researchers gained valuable information on the key features of the gambling environments in Victoria and Western Australia as well as the gambling opportunities for residents in the selected regions.

Surveys were undertaken of residents, local GPs in the regions of interest, Gambler's Help Counsellors and financial counsellors. Data was supplied by the Commonwealth Department of Family and Community Services, the Victorian Department of Human Services and its Western Australia counterpart. The researchers also sought a range of administrative data from agencies such as the Salvation Army, Anglicare, St. Vincent de Paul, VCOSS, WACOSS and Centrelink. An analysis of the national Productivity Commission survey was also undertaken with a focus on Western Australia and Victorian respondents.

Chapter Two

Profile of the Regions

Seven pairs of matched Victorian and Western Australian regions – four local government areas and three postcode areas – were selected for inclusion in this study. The postcode regions were included in the qualitative research undertaken for the project, but were not included in most of the data analysis, as very little of relevant data is available at the postcode level.

2.1 City of Wyndham, Victoria

The City of Wyndham is one of the fastest growing municipalities in Victoria. The City spans 542 square kilometres on a coastal plain on the southwestern fringe of Melbourne.

2.1.1 The People

The City of Wyndham had a usual resident total population of about 85,400 in 2001. About 70 per cent of the population was of adult age (i.e., 18 years and over). More recent estimates of the resident population indicate that Wyndham is one of the fastest growing regions in Victoria. The estimated resident population of the region increased by 7.9 per cent or 7,298 persons between 2002 and 2003 to reach a total population of 99,611 persons, which places Wyndham second among all Victorian Local Government Areas in terms of the fastest and largest aggregate increase in total population over this period.

Around 0.6 per cent of the City's residents were indigenous in 2001, which was marginally higher than the Victorian average of approximately 0.5 per cent.

Data from the Census Basic Community Profile indicates that Wyndham had a higher proportion of residents aged below 50 years than the State average and a smaller proportion of residents aged 50 years and over in 2001. Only 6.3 per cent of the population were aged 65 years or over compared to almost 13 per cent of the State population. About 4,877 people or 5.3 per cent of the estimated resident population in Wyndham were receiving the aged pension at 30 June 2002, which is below the average of 9.5 per cent for Victoria as a whole.

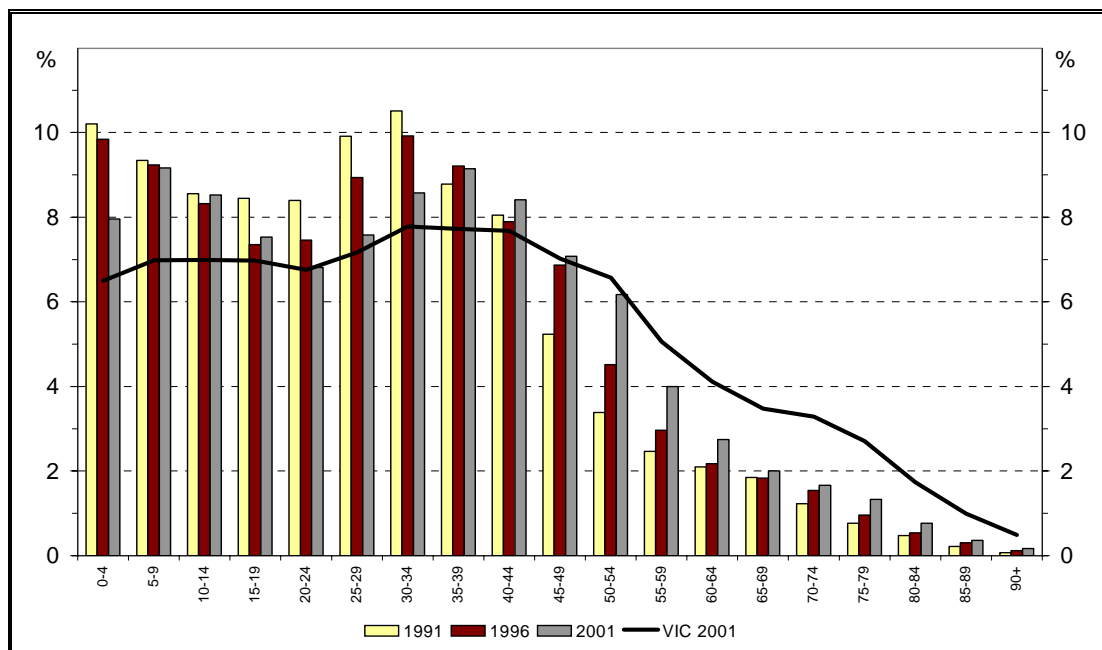
As for the State as a whole, the population has aged significantly over the past three Census periods. This is illustrated by Figure 2.1, which shows the changing age structure of the Wyndham population between 1991 and 2001.

Seventy two per cent of the residents of the City of Wyndham were born in Australia, roughly the same as the Victorian average of 71 per cent (see Table 2.1). Of those born overseas, the United Kingdom, Italy, New Zealand and the Philippines were the most common origins of migrants in 2001.

In 2001, the proportion of the adult population that was married was higher than the Victorian average (55 per cent compared to 52 per cent). The share of married persons was more than 8 percentage points lower than the 1991 figure of 63 per cent, which reflects an increase in the proportion of divorced residents and those who have never married.

The average level of educational attainment among the City of Wyndham population appears to be lower relative to the State average. Data from the Census Basic Community Profile indicates that 33 per cent of persons aged 15 years or over in Wyndham in 2001 had completed Year 12 or an equivalent as their highest level of schooling compared to 39 per cent of the Victorian population.

Figure 2.1
Age Distribution, City of Wyndham: 1991, 1996 & 2001



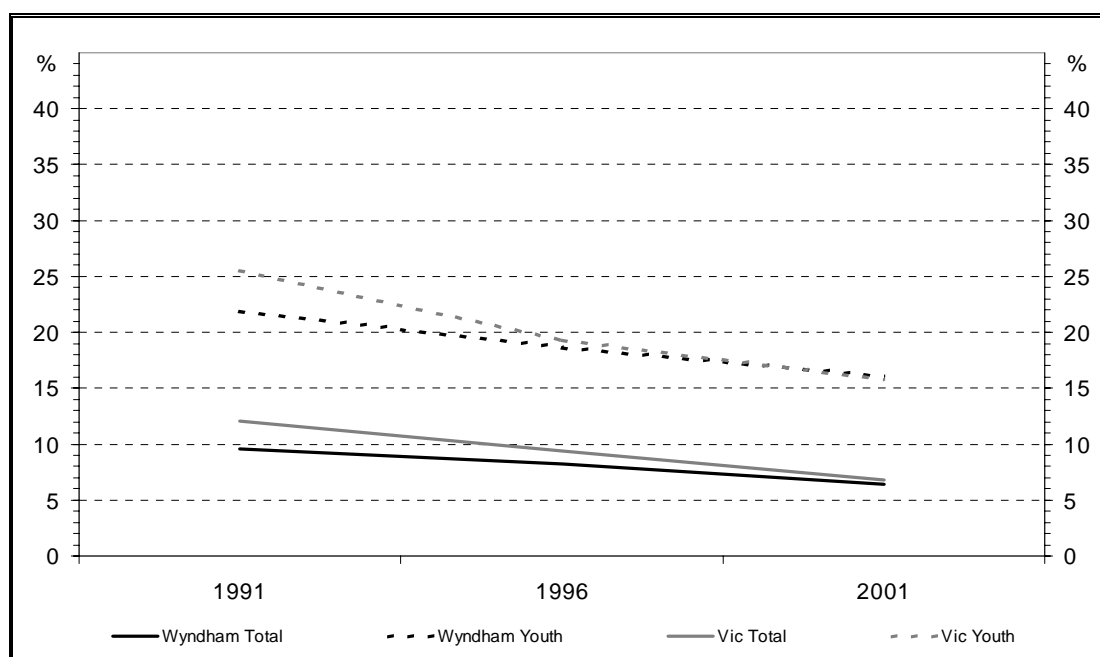
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Table 2.1
Country of Birth, City of Wyndham: 1991, 1996 & 2001
(Per cent)

	Wyndham 1991	Wyndham 1996	Wyndham 2001	Victoria 2001
Australia	74.3	73.0	72.0	70.6
United Kingdom	7.4	6.1	5.2	4.4
Italy	3.1	2.7	2.3	1.9
New Zealand	0.9	1.2	1.5	1.2
Philippines	1.1	1.3	1.4	0.5
Malta	1.3	1.2	1.1	0.5
India	0.5	0.7	0.7	0.7
Yugoslavia, Federal Republic of	n.a.	n.a.	0.7	0.4
Germany	0.6	0.6	0.5	0.6
Greece	0.7	0.6	0.5	1.2

Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Figure 2.2
Unemployment Rate, City of Wyndham: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.1.2 The Local Economy

Census data indicates that the rate of unemployment in the City of Wyndham has been similar to that for Victoria as a whole and, in line with Victorian rates, has fallen steadily since 1991. In 2001, the overall unemployment rate was 6.5 per cent (compared to the Victorian figure of 6.8 per cent) and the participation rate was 68 per cent (compared to 64 per cent for Victoria). Unemployment in the City was higher in 1991 (9.6 per cent) although the participation rate was also higher (72.1 per cent).

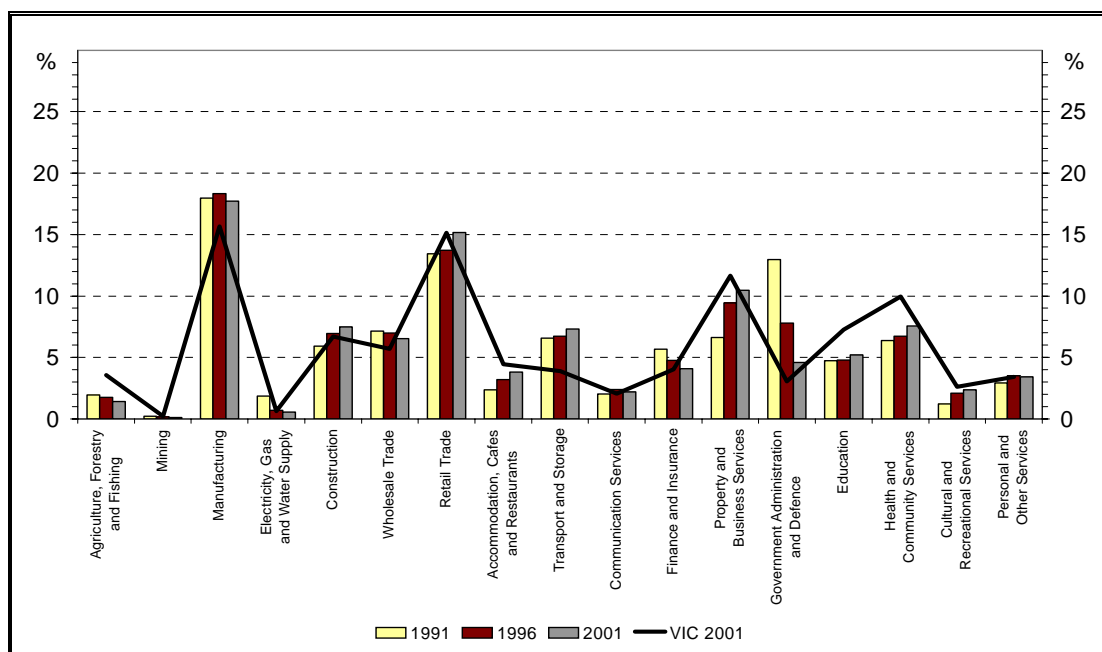
The trend in youth unemployment rates is similar. In 2001, 16.1 per cent of the labour force aged 15 to 19 was unemployed (compared to 15.8 per cent for the State). Ten years earlier, in 1991, 21.9 per cent of the City's youth was unemployed (25.6 per cent for the State).

The City of Wyndham is home to a diversity of sectors including significant industrial and technology districts, two major retail precincts, intensive vegetable growing areas and grazing lands. The principal areas of population in the City are Werribee, Hoppers Crossing and Wyndham Vale and there are several other major residential developments. Werribee South is home to one of the most significant market garden regions in the State. The City has a major industrial area at Laverton North and also hosts a number of Federal and State Government installations and State Reserves. Research and development is undertaken in the technology precinct at Hoppers Crossing and the City's retail sector includes the Werribee Central Business District and the freestanding Werribee Plaza.

In 1991, 1996 and 2001, like the State as a whole, more of Wyndham's workers were employed in the manufacturing industry than any other. In the latest of these three years, 18 per cent of employed persons in the City worked in manufacturing compared to the State average of 16 per cent.¹ Other major employing industries were retail trade (15 per cent in 2001) and property and business services (10 per cent).

Employment in the various industries has been relatively stable over the three Census periods with the exception of government administration and defence, this sector share of employment fell from 13.0 per cent in 1991 to only 4.6 per cent in 2001. This is illustrated by Figure 2.3 which shows employment by industry for Wyndham for the last three Census years and for Victoria for 2001.

Figure 2.3
Employment by Industry, City of Wyndham: 1991, 1996 & 2001*

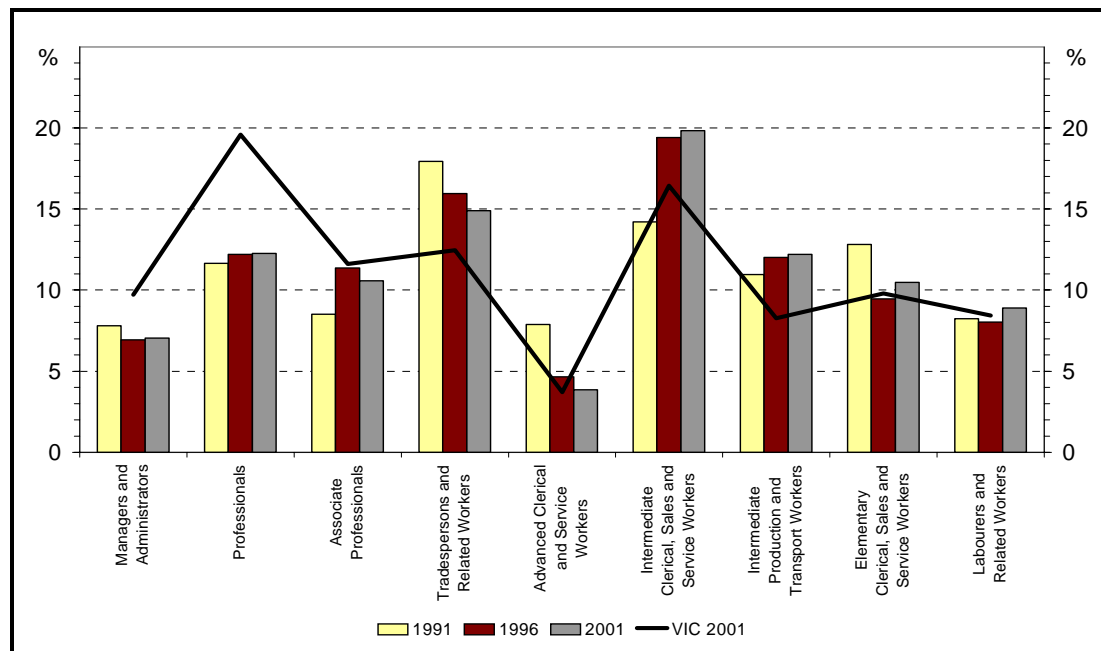


Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Figure 2.4 shows the occupational pattern of employment for Wyndham as revealed by Census data. By occupation, the City of Wyndham is under-represented in the occupations of managers and administrators, professionals and associate professionals in comparison to Victoria as a whole (i.e., occupations that are relatively highly skilled). In contrast, the City has a higher proportion of intermediate clerical, sales and service workers, tradespersons and related workers, and intermediate production and transport workers. In 2001, the major occupation category was intermediate clerical, sales and service workers, which accounted for 20 per cent of employed persons compared to 14 per cent in 1991.

¹ Proportions have been calculated excluding non-classifiable economic units and not stated.

Figure 2.4
Employment by Occupation, City of Wyndham: 1991, 1996 & 2001*



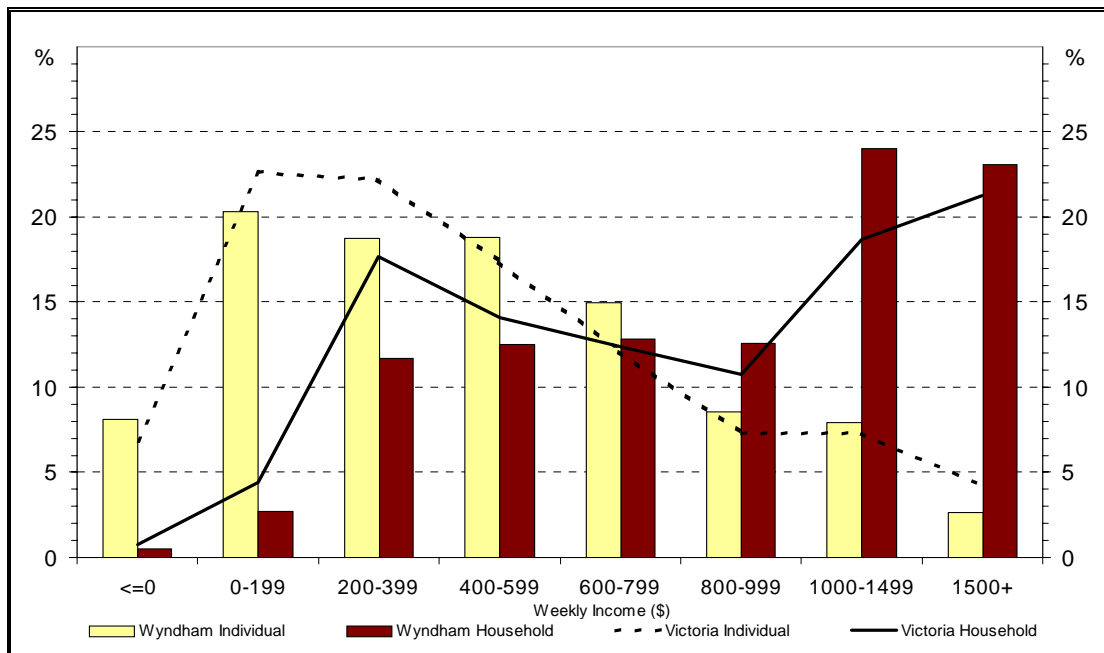
Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.1.3 Income Distribution

Census data indicates that the distribution of personal income in the City of Wyndham was similar to the average across the State in 2004 although Wyndham tends to be more strongly represented among mid to high income brackets (see Figure 2.5). This trend is particularly evident for household income with Wyndham having a higher proportion of households in income brackets above \$800 per week compared to the State average, and relatively lower representation in lower income brackets.

Personal taxation statistics from the Australian Taxation Office (ATO) indicate that, since 1985-86, mean taxable income for the City of Wyndham has been closely aligned with the mean for Victoria as a whole (see Figure 2.6). However, around five years ago, mean taxable income in the City levelled off while it continued to grow for Victoria as a whole. As a result, the mean taxable income for the City fell below the State average and the gap has remained since this time.

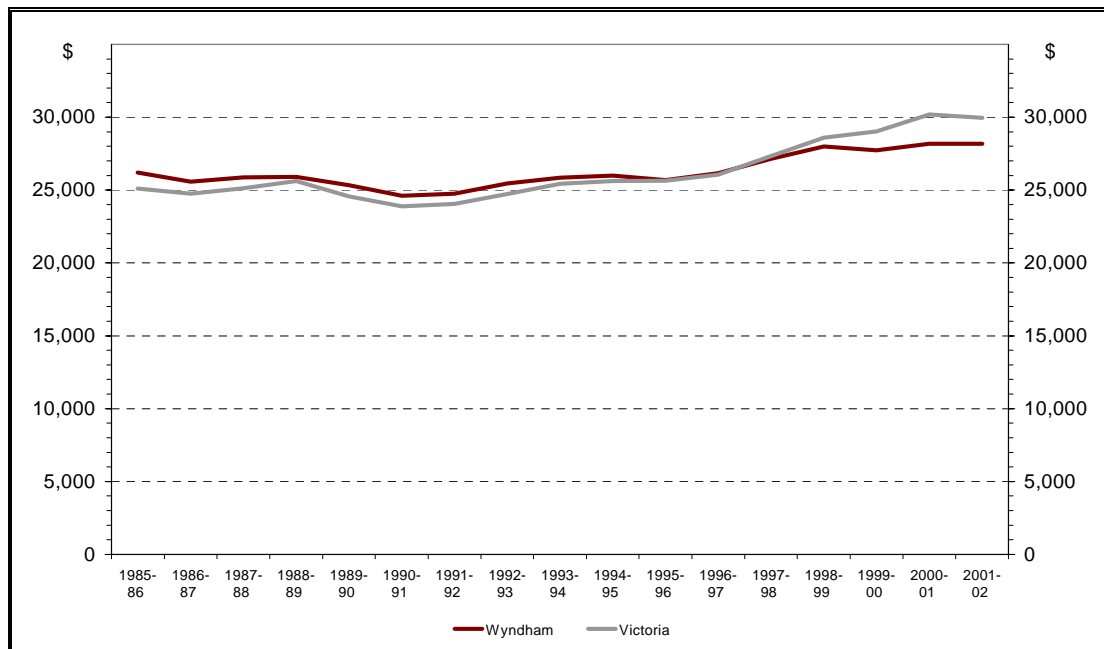
Figure 2.5
Income Distribution of Households and Individuals, City of Wyndham and Victoria: 2001*



Note: * Proportions have been calculated excluding those who did not state their income and/or only stated partial income.

Source: ABS, 2001 Census Basic Community Profiles.

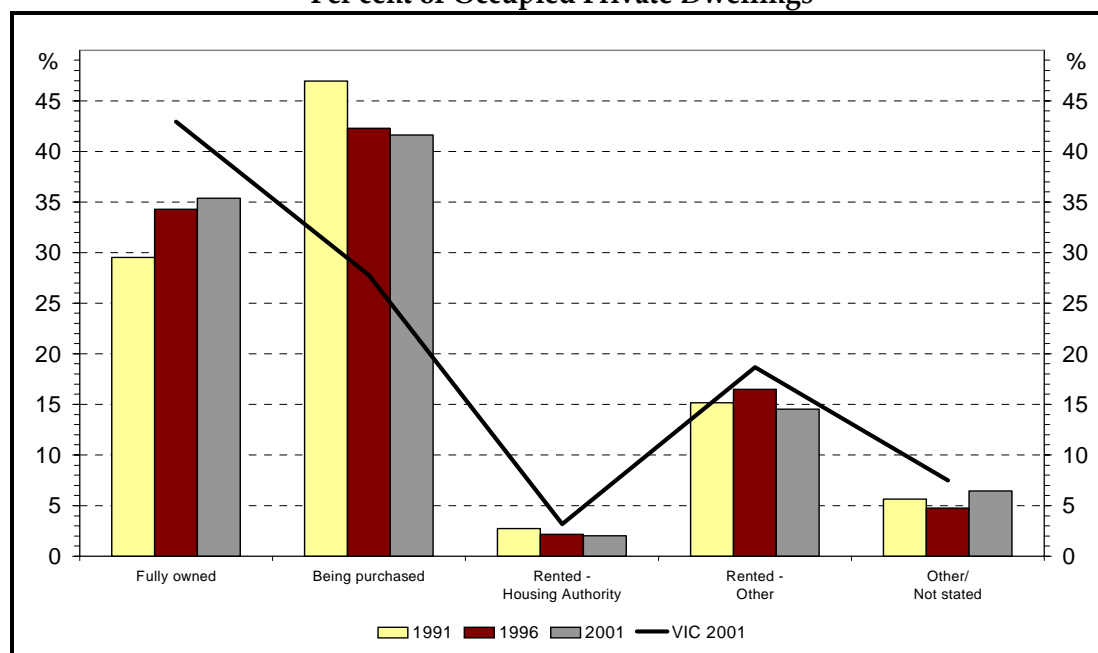
Figure 2.6
Mean Taxable Income, City of Wyndham and Victoria



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

A high proportion of households in the City of Wyndham (77 per cent) either fully own or were purchasing their own home in 2001 compared to the State average of 71 per cent. As a consequence, a relatively low proportion of occupied private dwellings were being rented in 2001 (see Figure 2.7).

Figure 2.7
Household Tenure Type, City of Wyndham: 1991, 1996 & 2001
Per cent of Occupied Private Dwellings



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.1.4 Recreation and Gaming for City of Wyndham

The characteristics of gambling environment for the City of Wyndham are summarised in the Table 2.2.

Table 2.2
Gambling Indicators for City of Wyndham, 2003-04

Venues: 2004 ¹	10
EGMs: 2004	571
EGMs per 1,000 adults (2003-04)	9.1
Gaming Losses 2003/04, \$ million	\$60.0
Losses per Adult 2003-04	\$955
Cumulative Losses since 1992-93 (\$ millions: adjusted to 2004 dollars)	\$507
Cumulative Losses per Adult since 1992-93 (adjusted to 2004 dollars)	\$8,078

Note: ¹ Number of electronic gaming machines at 30 June 2004 in hotels and clubs.

Source: Victorian Local Government Association.

Since May 2001 there have been 10 venues operating in the City of Wyndham. The number of gaming machines increased by 43 to 571 from end of 1999 to mid-2004. Net gaming revenue per machine increased from \$8,122 in the December quarter of 1999 to

\$9,012 in the June quarter of 2002, which is around \$2,000 above the Victorian average. Some 42 per cent of respondents in the SACES survey indicated they played EGMs which was the highest of the four Victorian regions. In the matching region of Cockburn less than 2 per cent played EGMs. The City of Wyndham ranked the third highest among all local government areas in Victoria in terms of gaming losses per adult in 2003-04.

2.2 City of Cockburn, Western Australia

Situated 22 kilometres south of Perth and 8 kilometres south of Fremantle, the coastal City of Cockburn is one of the fastest growing areas in the metropolitan area of Western Australia and is renowned for its historical and tourism features along with its agriculture and ship building industries.

2.2.1 The People

Data from the Census Usual Residents Profile indicates that the City of Cockburn had a total population of 66,600 people in 2001. About 72 per cent of the population were of an adult age. More recent estimates of total population from the ABS indicates that the City of Cockburn had an estimated resident population of 72,471 in mid-2003, which is 1.9 per cent or 1,319 persons higher than a year earlier (the total State population is estimated to have risen by 1.4 per cent over this period). Of the 142 local government areas in Western Australia, Cockburn was ranked 27th in terms of fastest rate of population growth, and 7th in terms of the largest increase in population between 2002 and 2003.

Around 1.9 per cent of all residents in the City of Cockburn in 2001 were Aboriginal or Torres Strait Islander, which is below the indigenous population's share of the total Western Australian population (3.2 per cent).

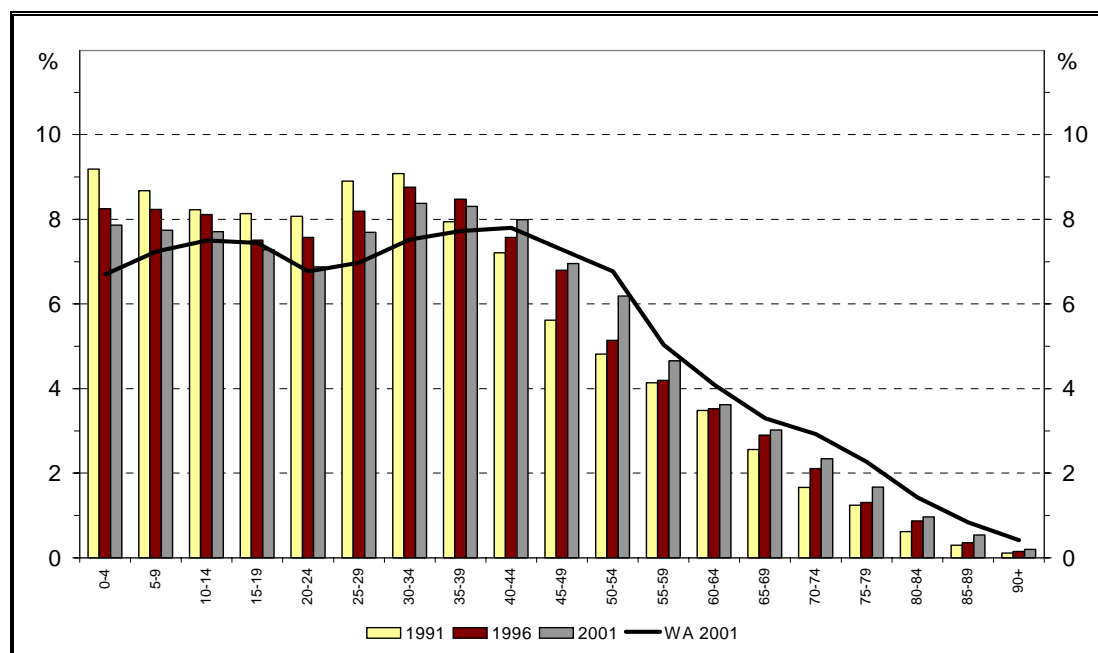
The age distribution of the Cockburn population is similar to that for the State overall, with Cockburn having a slightly higher proportion of residents between the ages of 25 and 44 years (i.e. young families) compared to the State in 2001 (see Figure 2.8). Only 8.7 per cent of the Cockburn population was aged 65 or above, which is significantly lower than the overall State average of 11.2 per cent. About 5,181 people or 7.3 per cent of the estimated resident population in Cockburn was receiving the aged pension at 30 June 2002, which is slightly below the average of 7.9 per cent for the State as a whole.

Some 66 per cent of Cockburn residents were born in Australia which is close to the State figure of 67 per cent. Over one quarter of the residents of Cockburn who were born overseas originated from the United Kingdom, while Italy and New Zealand were other significant origins for persons born overseas (see Table 2.3).

In 2001, almost 53 per cent of residents over 15 years of age in the City of Cockburn were married compared to over 59 per cent in 1991. The proportion of married adults in the State in 2001 was almost 51 per cent. The City of Cockburn and the State had similar proportions of persons who were divorced or had never married in 2001 (about 7.5 per cent and 32 to 33 per cent respectively).

Average education levels among the population of the City of Cockburn as measured by the highest level of schooling completed (i.e., excluding post secondary education) is somewhat lower than for the State overall. About 34 per cent of persons aged 15 years and over in the City of Cockburn had completed Year 12 or an equivalent compared to 38 per cent of all people in the State.

Figure 2.8
Age Distribution, City of Cockburn: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Table 2.3
Country of Birth, City of Cockburn: 1991, 1996 & 2001
(Per cent)

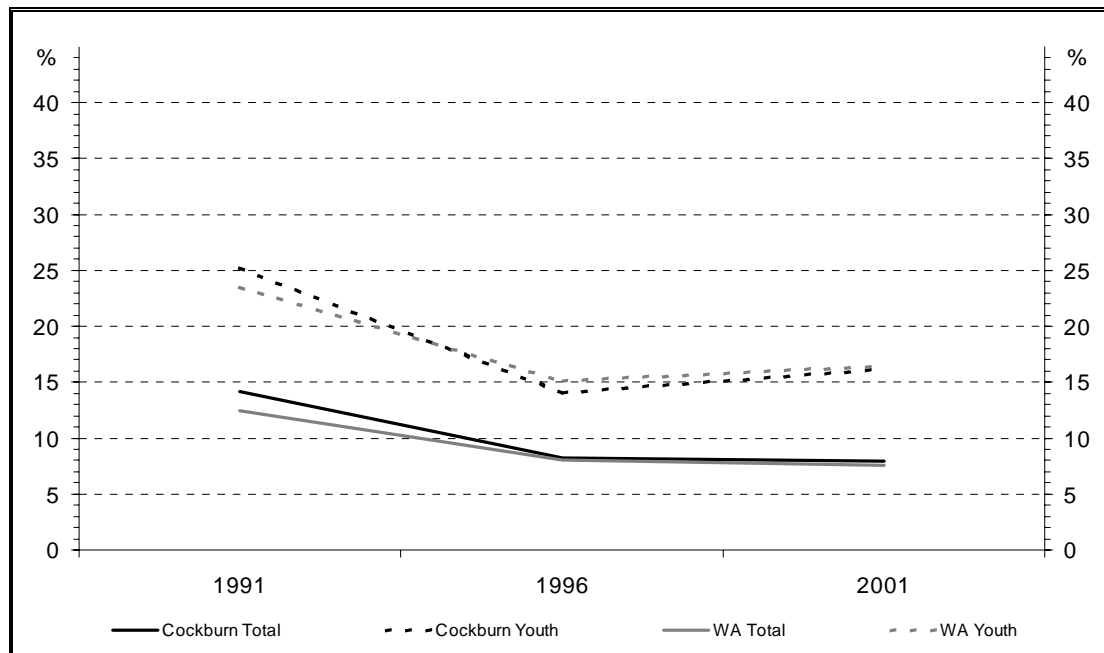
	Cockburn 1991	Cockburn 1996	Cockburn 2001	WA 2001
Australia	67.0	66.0	65.9	67.1
United Kingdom	12.1	10.7	9.7	10.9
Italy	3.7	3.2	2.7	1.2
New Zealand	1.6	1.8	2.0	2.4
Croatia	n.a.	1.7	1.9	0.3
Portugal	2.1	1.9	1.6	0.1
South Africa	0.7	0.7	0.9	0.8
Malaysia	0.5	0.8	0.7	0.9
Yugoslavia, Federal Republic of	n.a.	n.a.	0.7	0.2
India	0.7	0.7	0.6	0.7

Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.2.2 The Local Economy

The rate of unemployment in the City of Cockburn, especially in the past two Censuses, has been very closely aligned with the unemployment rate for the State as a whole (see Figure 2.9). The unemployment rate fell significantly in the five years between 1991 and 1996 and has stabilised around 8 per cent. The participation rate in the City has been steady over the past three Census at around 66 per cent.

Figure 2.9
Unemployment Rate, City of Cockburn: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

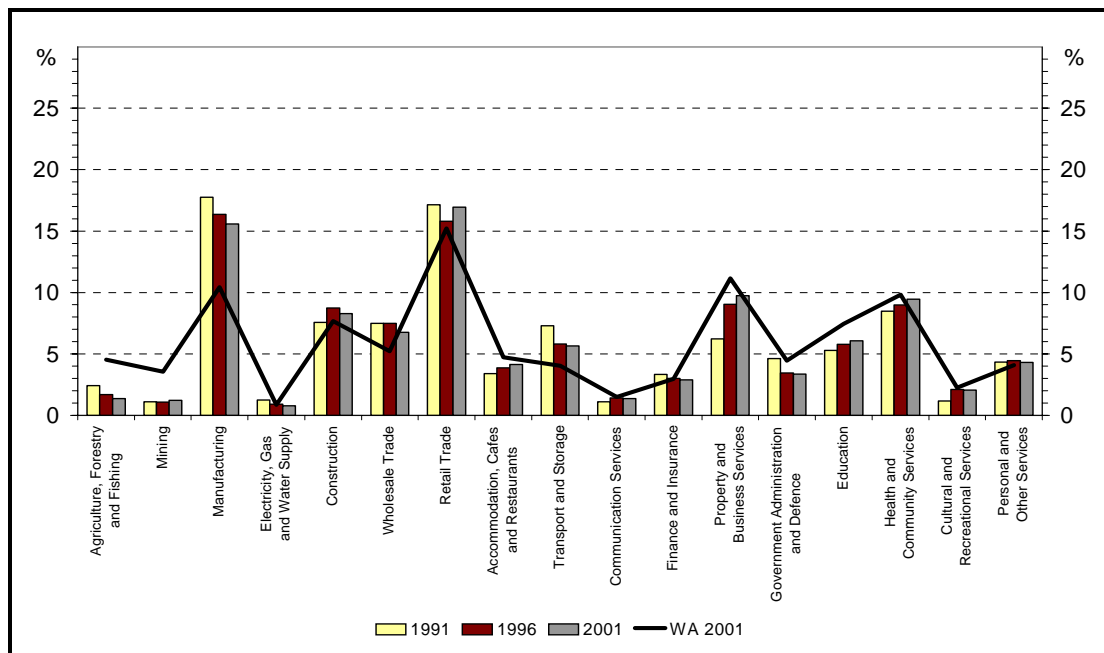
Youth unemployment has experienced a similar trend to the overall unemployment rate. The rate of youth unemployment in the City fell by 11 percentage points between 1991 and 1996 in line with the State youth unemployment rate but rose slightly to 16.2 per cent in 2001. The youth unemployment rate for Western Australia in 2001 was 16.4 per cent.

The City of Cockburn is known for its ship building industry as well as its market gardens and road transport. Large national ship building companies, including Austal Ships, are all located in the Cockburn suburb of Henderson. The City is also home to a light aircraft airport.

As Figure 2.10 shows, manufacturing and retail trade have been the dominant employing industries in the City of Cockburn over the past three Census periods. The proportion of the City's workers employed in manufacturing in 2001 was significantly higher than the State average (16 per cent c.f. 10 per cent). The proportion of Cockburn's working population employed in agriculture, forestry and fishing has declined over the past 3 Census periods and was well below the State average in 2001 indicating that the market gardening activities of former years are declining as suburban Perth expands.

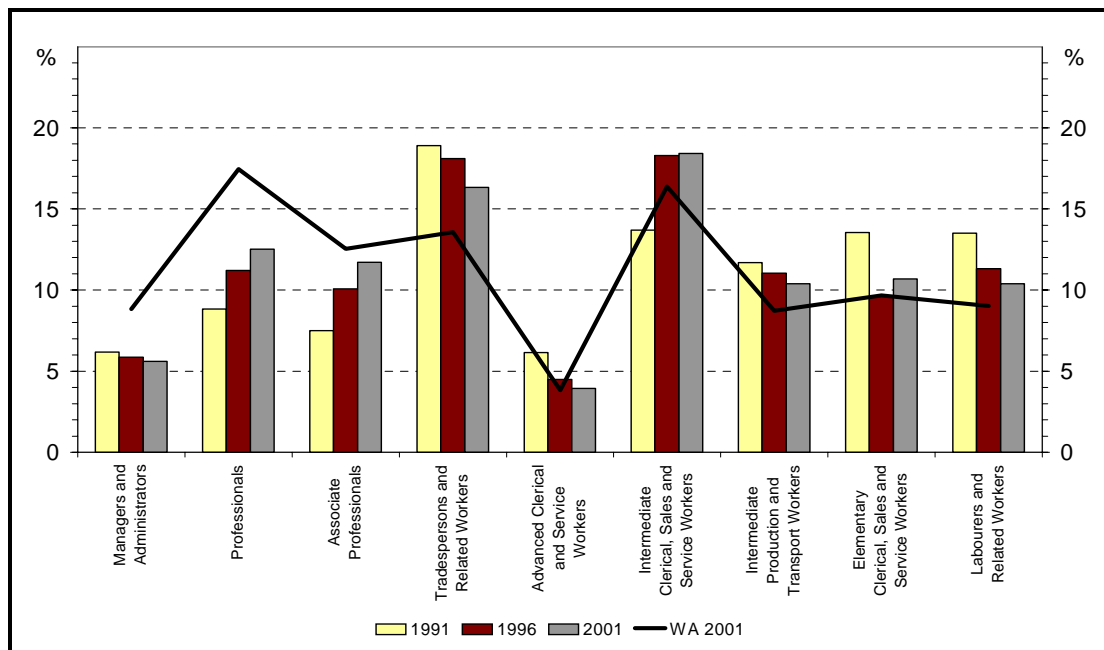
In terms of the occupational profile of the population, as illustrated by Figure 2.11, Cockburn has a lower proportion of its working population employed in highly skilled occupations such as managers and administrators, professionals and associate professionals in comparison to Western Australia as a whole. By contrast, the proportion of intermediate clerical, sales and service workers and tradespersons and related workers is somewhat higher than the average for the State. In 2001, the largest occupation category was intermediate clerical, sales and service workers (about 18 per cent of employed persons).

Figure 2.10
Employment by Industry, City of Cockburn: 1991, 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Figure 2.11
Employment by Occupation, City of Cockburn: 1991, 1996 & 2001*

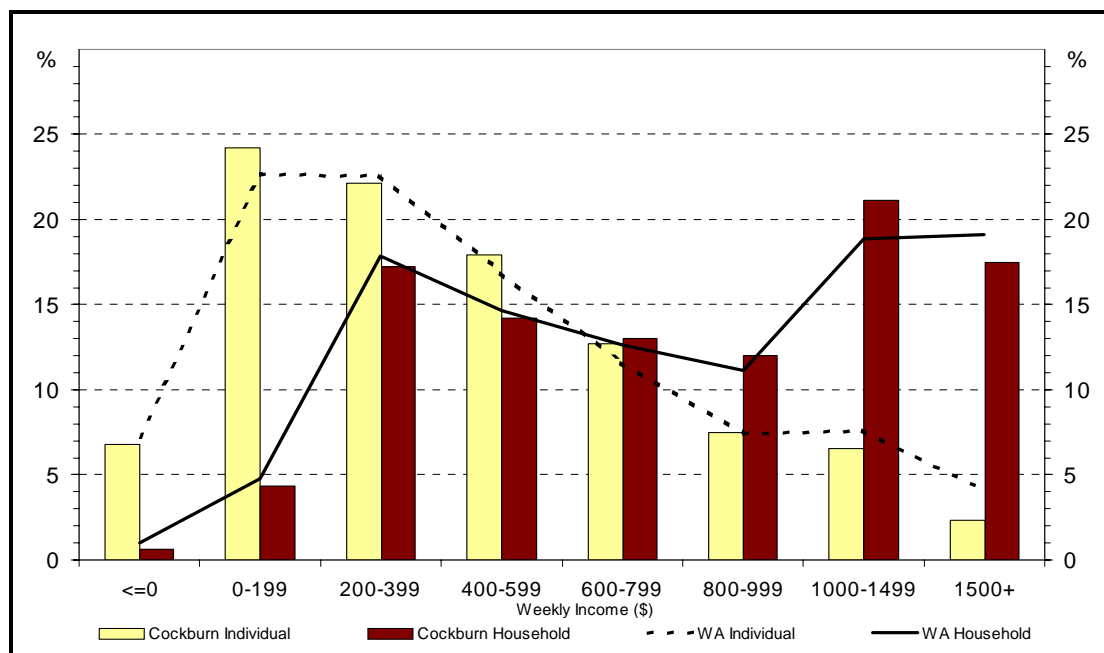


Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.2.3 Income Distribution

The distribution of individual income in the City of Cockburn at the time of the 2001 Census was quite closely aligned with the distribution for Western Australia (see Figure 2.12). However, in terms of household income, a slightly higher proportion of households in Cockburn earned between \$1,000 and \$1,500 per week compared to the State (21 per cent c.f. 19 per cent; excluding those households who did not state an income or only partial incomes). However, a lower proportion of households in Cockburn earned more than \$1,500 per week (17 per cent c.f. 19 per cent).

Figure 2.12
Income Distribution of Households and Individuals, City of Cockburn: 2001*



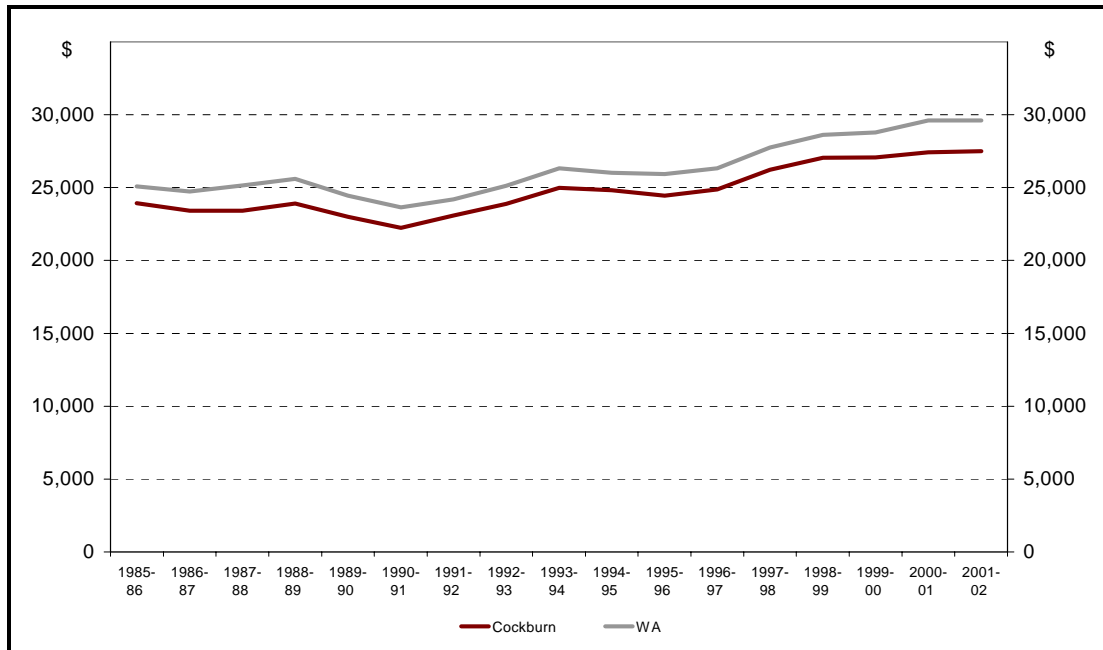
Note: * Proportions have been calculated excluding those who did not state their income and/or only stated partial income.

Source: ABS, 2001 Census Basic Community Profiles.

Mean taxable income data indicates that while the average income for the City of Cockburn was consistently slightly below the State average between 1985-86 and 2001-02, growth in average taxable incomes for the City of Cockburn has closely followed the path of average income for the State as a whole over this period. In real terms, the mean taxable income increased by around 15 per cent over the 17 years to 2001-02 from a base of slightly less than \$24,000 in 1985-86. Mean taxable income for Western Australia increased by around 18 per cent over this period from a base of just over \$25,000.

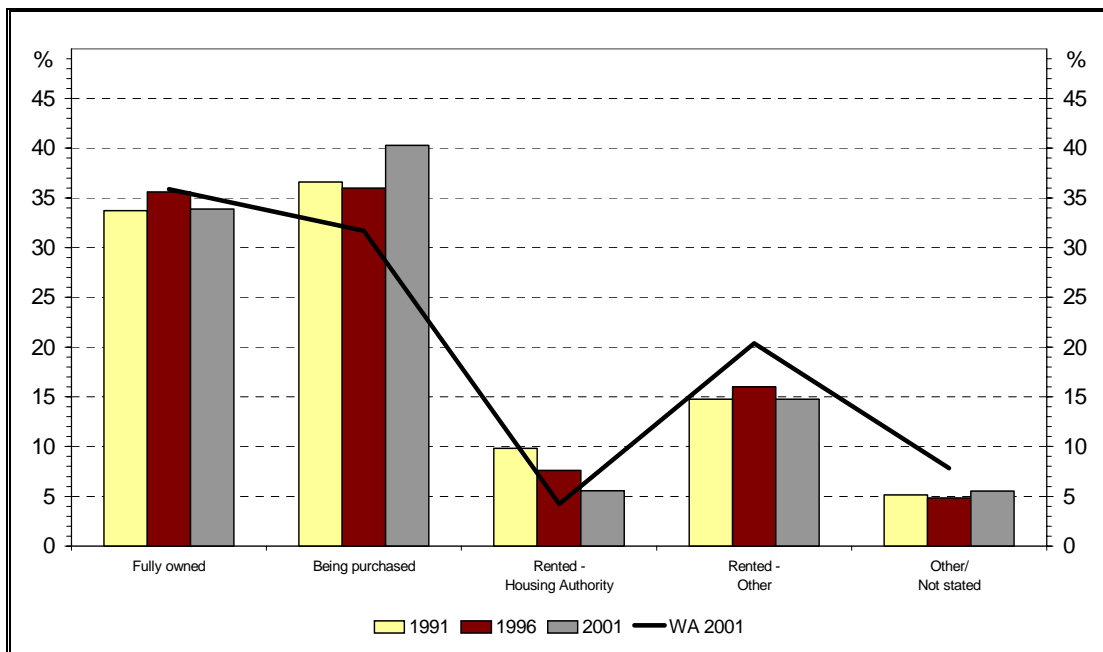
Figure 2.14 shows for the City of Cockburn and Western Australia the pattern of tenure that households had in their dwellings at the time of the 2001 Census (and for earlier years for the City of Cockburn). The City of Cockburn had a higher proportion of occupied private dwellings in the process of being purchased in 2001 compared to the State (40 per cent versus 32 per cent). In comparison with the State as a whole, Cockburn had a smaller proportion of occupied private dwellings that were fully owned or being rented from non-housing authority landlords.

Figure 2.13
Mean Taxable Income, City of Cockburn: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

Figure 2.14
Household Tenure Type, City of Cockburn: 1991, 1996 & 2001
Per cent of Occupied Private Dwellings



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.2.4 Recreation and Gaming

The age demographics of the City of Cockburn – relatively young individuals and families – combined with relatively strong population growth and recent investment in facilities have resulted in relatively high participation in sporting clubs in the region. Cricket, soccer, football and surf life saving clubs are experiencing relatively high demand for members. On the other hand, some senior clubs in the region are struggling for members.²

Although there are a number of significant shopping outlets and opportunities in the City, hotels in the area are quite old – some have closed – although efforts are increasing to make those remaining more family-friendly. There is no cinema complex in the region although, as the railway extends south, recreation activities and opportunities in the area are expected to increase. At this stage, however, many of Cockburn's residents travel to Fremantle or Perth for hotels, cafes, restaurants and nightclubs.

Gaming opportunities in the region are limited. As with the rest of the State, the TAB, lotto, scratchies and bingo are popular forms of entertainment. Cockburn Shire recorded the highest level of expenditure on Lotto and Scratch and Win in 2002-03 with \$16.9 million or \$323 per adult on average. This is 2.2 times the average spend on lotteries for all Western Australians. Some 83 per cent of residents indicated they purchased a weekly lottery ticket. Residents of Cockburn tended to visit the casino more frequently than in other regions (21 per cent) while one third of residents wagered at the TAB.

Card games with relatives and friends are also common. On a daily basis, buses leave from the local hub direct to the Burswood Casino in Perth and similar trips are occasionally run by local seniors groups (especially bingo halls).

2.3 City of Maribyrnong, Victoria

The City of Maribyrnong is located on the west bank of the Maribyrnong River, a few kilometres west of Melbourne's central business district and bordering the City of Melbourne local government area. The area incorporates the suburbs of Braybrook, Footscray, Kingsville, Maidstone, Maribyrnong, Seddon, West Footscray and Yarraville. It includes a large industrial sector and has the second most ethnically diverse population in Victoria. Maribyrnong is the most economically disadvantaged LGA in Melbourne with one of the lowest rankings within the SEIFA³ index in Victoria, and the second highest concentration of EGMs per 1,000 persons at 13.1.

2.3.1 The People

The 2001 Census Usual Residents Profile indicates that the City of Maribyrnong had a total population of 59,650 people at the time of the Census. About 80 per cent of the population were of adult age. More recent estimates from the ABS indicate that Maribyrnong had an estimated total resident population of 61,863 as at 30th June 2003.

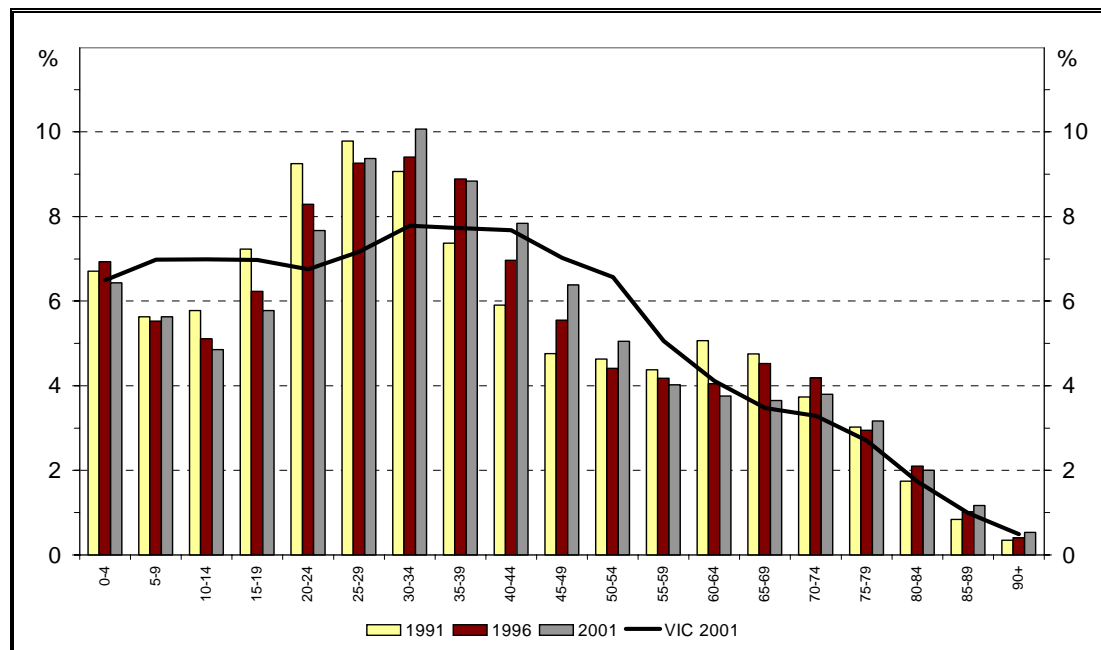
² Correspondence and comments from City of Cockburn and discussions with the researchers (2004).

³ ABS, *Socio Economic Index for Areas*.

The population for the region is estimated to have increased by 0.7 per cent between mid 2002 and mid 2003, which is below the 1.2 per cent estimated increase in total population for Victoria over this period.

About 0.4 per cent of the population in Maribyrnong in 2001 was indigenous compared with a State average of 0.5 per cent.

Figure 2.15
Age Distribution, City of Maribyrnong: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

The age distribution of the City of Maribyrnong population is somewhat different to that for Victoria with a significantly higher proportion of people in the young to mid age group (i.e., 20 to 44 years), and to a lesser degree, in the very old age bracket (i.e., 65 years and over). About 44 per cent of the Maribyrnong population was aged 20 to 44 years in 2001 compared to 37 per cent of the total Victorian population. This pattern reflects that Maribyrnong is situated close to the City of Melbourne and thus attracts a younger population that is attracted to the city lifestyle. For instance, only 42 per cent of persons aged 15 years and over in Maribyrnong were married compared to 52 per cent of the respective Victorian population. Furthermore, a larger proportion of the Maribyrnong than Victorian population were living in lone person households in 2001 (14 per cent c.f. 9.8 per cent), and in group households (6.0 per cent c.f. 3.5 per cent), while a significantly lower proportion of the Maribyrnong than State population were living in a couple family with children situation (42 per cent c.f. 54 per cent).

Approximately 14 per cent of the population enumerated in Maribyrnong on Census night were aged 65 years or above compared to almost 13 per cent of the Victorian population. The slightly larger share of persons aged 65 years and over in Maribyrnong is confirmed by data on age pension recipients, with ABS National Regional Profile data indicating that an equivalent of almost 12 per cent of the estimated resident population in Maribyrnong were receiving the age pension at June 2002 compared to 9.5 per cent of the Victorian population.

Maribyrnong has an extremely diverse cultural background with Census data indicating that almost 49 per cent of the population were born overseas compared to 30 per cent of the Victorian population. The most common overseas location from which persons in Maribyrnong were born was Vietnam, which accounted for 11 per cent of the population in 2001 compared to only 1.2 per cent of the Victorian population (see Table 2.4). Other common overseas locations from where people in Maribyrnong were born were the United Kingdom (2.7 per cent), Italy (2.4 per cent), and Greece (2.1 per cent).

Table 2.4
Country of Birth, City of Maribyrnong: 1991, 1996 & 2001
(Per cent)

	Maribyrnong 1991	Maribyrnong 1996	Maribyrnong 2001	Victoria 2001
Australia	53.6	51.1	51.2	70.6
Vietnam	10.9	13.6	11.3	1.2
United Kingdom	3.5	2.9	2.7	4.4
Italy	3.3	2.8	2.4	1.9
Greece	2.9	2.5	2.1	1.2
China (excl SARs & Taiwan Prov)	1.3	1.7	1.6	0.8
New Zealand	0.9	1.0	1.3	1.2
Macedonia, FYROM	n.a.	1.7	1.3	0.4
Philippines	1.7	1.6	1.3	0.5
Yugoslavia, Federal Republic of	n.a.	n.a.	1.2	0.4

Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

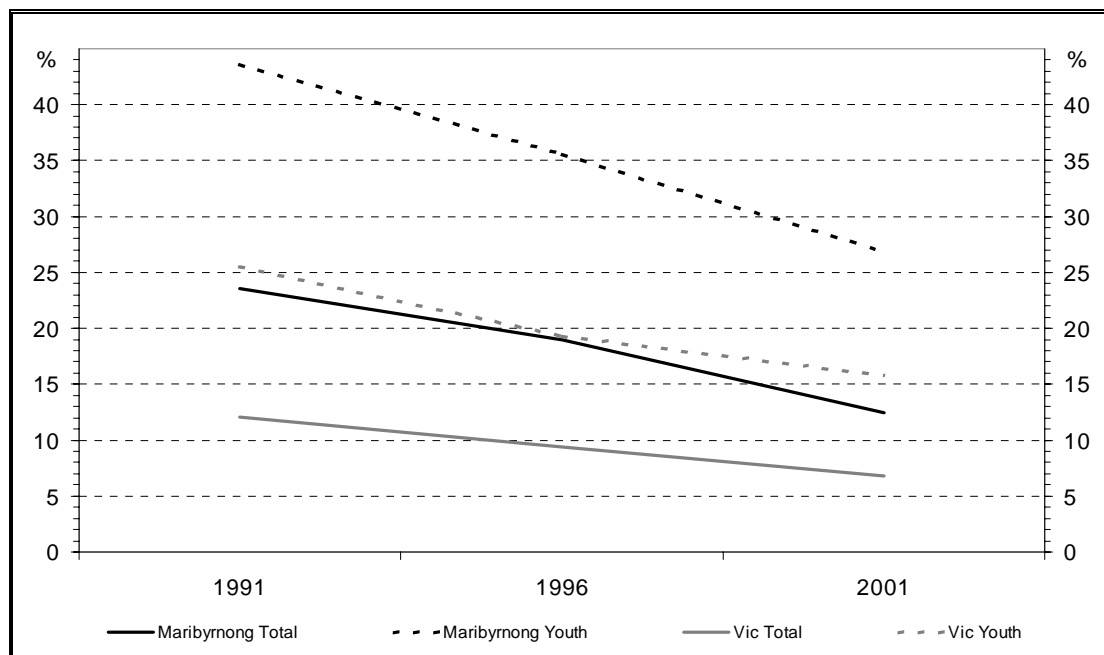
In terms of educational attainment the Maribyrnong population tends to have slightly higher achievement compared to the Victorian average with around 41 per cent of persons aged 15 years and over completing Year 12 compared to 39 per cent for the State. However, the pattern of non-school qualifications (i.e., post secondary school) for both populations is very similar.

2.3.2 The Local Economy

Figure 2.16 shows that unemployment in Maribyrnong has consistently remained above the State average over the last 3 Census years. Some 12 per cent of the labour force were unemployed at the time of the 2001 Census compared to an average of 6.8 per cent for Victoria. In line with State and national trends, unemployment in the region has fallen significantly since 1991. More recent estimates indicate that Maribyrnong continues to have a relatively high level of unemployment. The Department of Employment and Workplace Relations Small Area Labour Markets series indicates that Maribyrnong had an unemployment rate of 11.3 per cent in the September quarter of 2004 compared to an average unemployment rate of 5.7 per cent for Victoria.

Youth unemployment is quite high in the City of Maribyrnong. In 2001, about 27 per cent of the City's population aged 15 to 19 years were unemployed compared to the State average of 15.8 per cent although, again, there has been a considerable improvement in the City's youth unemployment rate since 1991 (43.6 per cent).

Figure 2.16
Unemployment Rate, City of Maribyrnong: 1991, 1996 & 2001



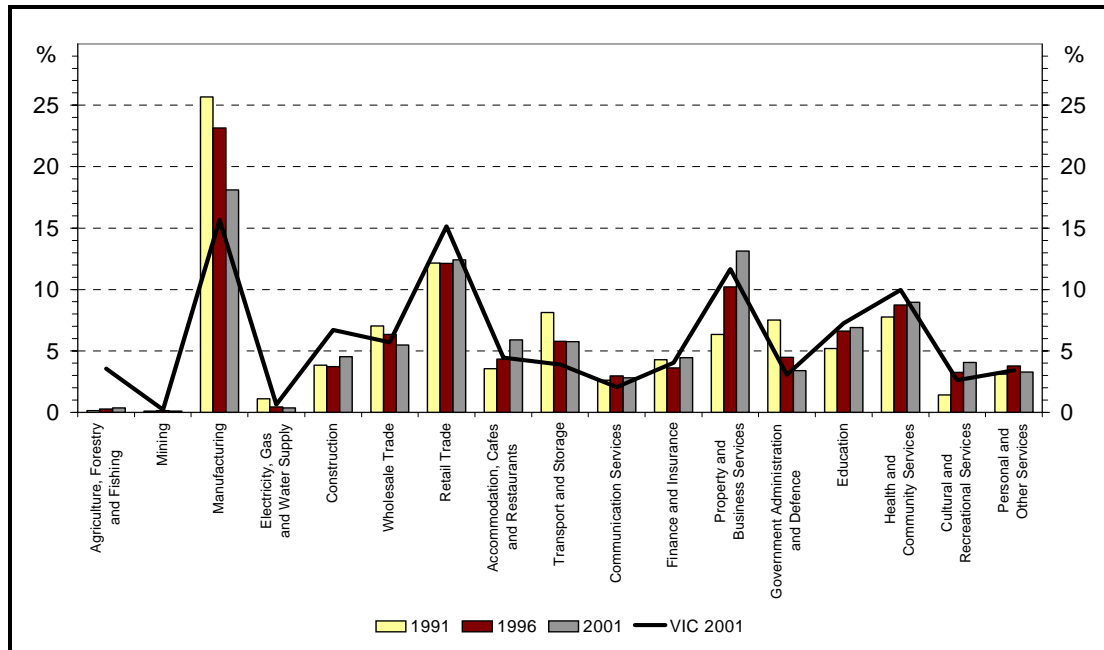
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

The City of Maribyrnong is divided into tracts of residential, commercial and industrial areas. A high proportion of the labour force is employed in the manufacturing industry (18 per cent in 2001 compared to 16 per cent for the State). Significant industries in the area include Mobil, Pivot Fertilisers, the Dunlop Olympic Tyre factory and the Pampas pastry plant. Property and business services (13 per cent of employed persons) and retail trade (12 per cent) are also major employing industries in the region (see Figure 2.17).

Maribyrnong City is also the transport hub of the western region. The Western and Princes Highways converge at Footscray on their journeys west and south, as do the St Albans/Melton and Werribee/Williamstown railway lines. The West Gate Freeway lies just 3 kilometres to the south. Footscray is also the furthest point at which substantial or masted boats can venture up river.

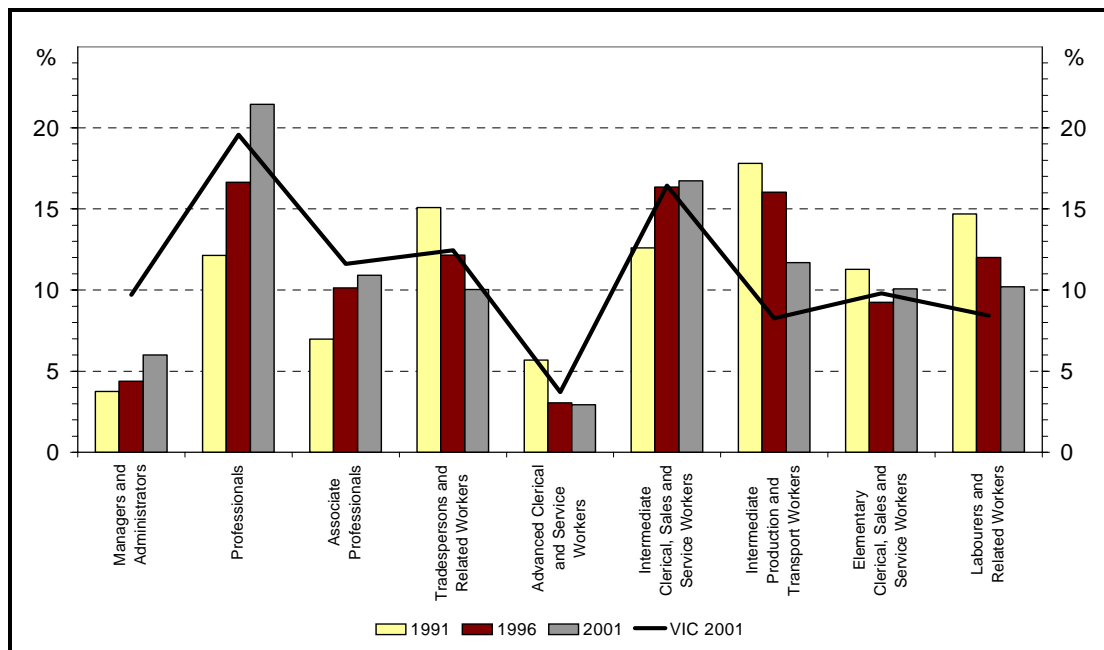
Figure 2.18 shows a proportional breakdown of employed persons in Maribyrnong by their broad occupation for the last three Census years and for the State in 2001. There are some differences between the two areas. Maribyrnong had a relatively smaller share of workers employed as managers and administrators compared to the State in 2001 (6.0 per cent c.f. 9.7 per cent), while it had a larger share employed as intermediate production and transport workers (11.7 per cent c.f. 8.3 per cent). The latter reflects the importance of the manufacturing and transport industries to the region. However, the proportion of workers employed in this occupation category has fallen significantly since 1991 (from 18 per cent), while the share of workers employed as professionals rose significantly over this period (12 to 21 per cent). This outcome reflects a shift in the local economy away from manufacturing during the 1990s.

Figure 2.17
Employment by Industry, City of Maribyrnong: 1991, 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Figure 2.18
Employment by Occupation, City of Maribyrnong: 1991, 1996 & 2001*



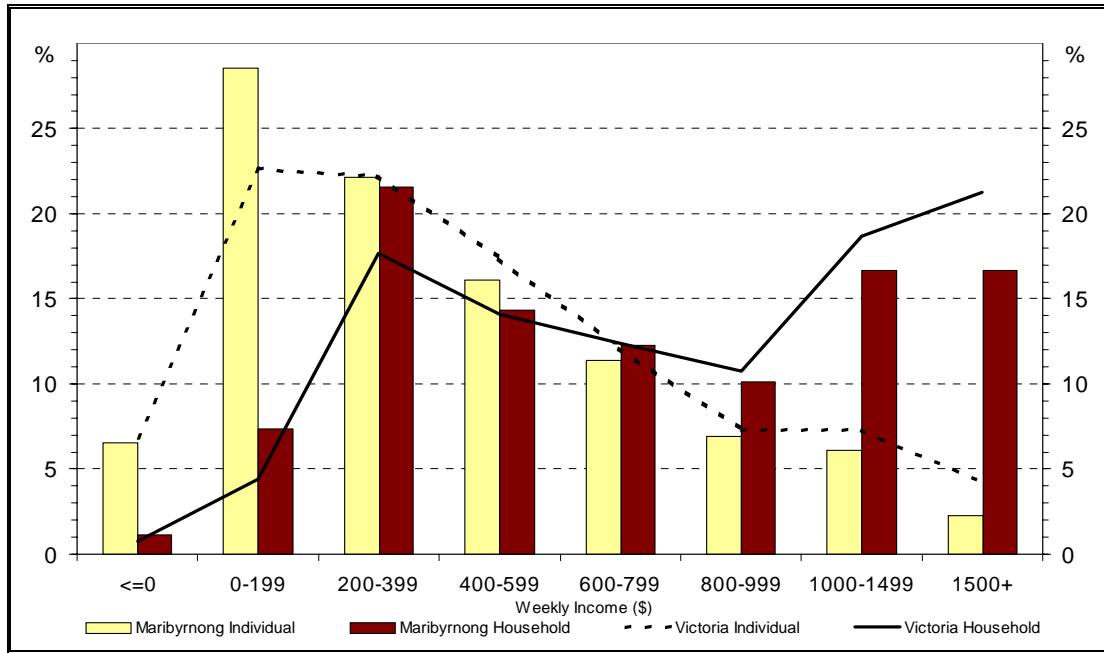
Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.3.3 Income Distribution

The income distribution of the Maribyrnong population was quite different to the average Victorian distribution with the Maribyrnong population being skewed towards lower income levels, indicating that the region has relatively lower average incomes compared to the State as a whole. As Figure 2.19 shows, a much higher proportion of

individuals in Maribyrnong earned less than \$600 per week compared to the State in 2001 (73 per cent c.f. 69 per cent). Data from the ATO on mean taxable income indicates that while the average income for the region has grown at a similar rate to the State average over the past 17 years, average taxable income for the region has been consistently lower than the State average over this period (see Figure 2.20).

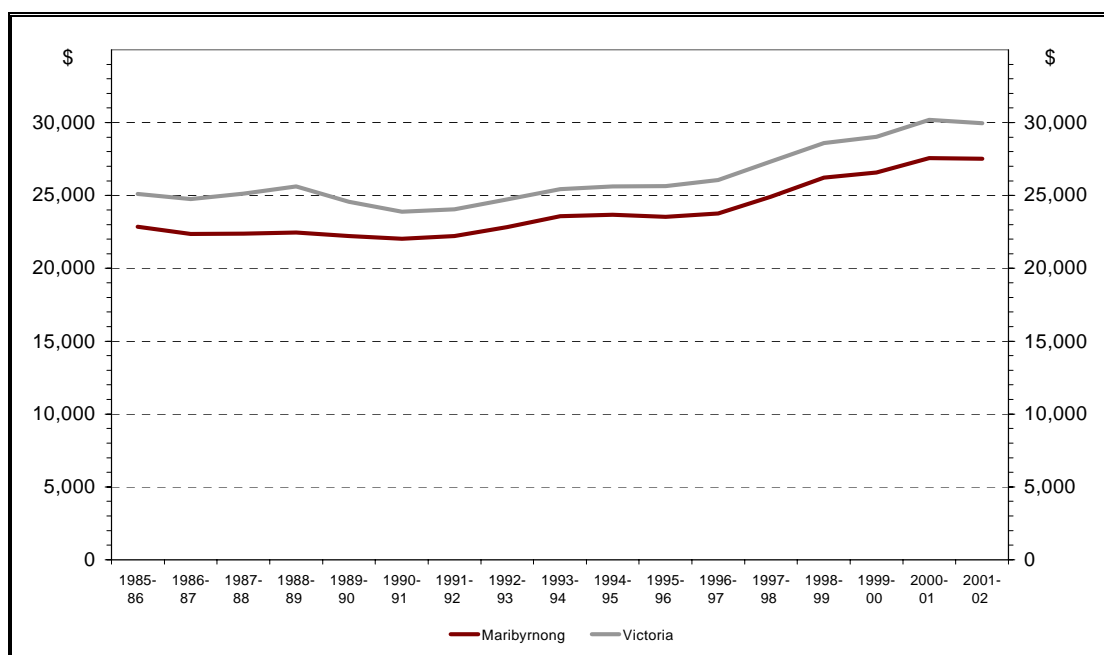
Figure 2.19
Income Distribution of Households and Individuals, City of Maribyrnong and Victoria: 2001*



Note: * Proportions have been calculated excluding those who did not state their income and/or only stated partial income.

Source: ABS, 2001 Census Basic Community Profiles.

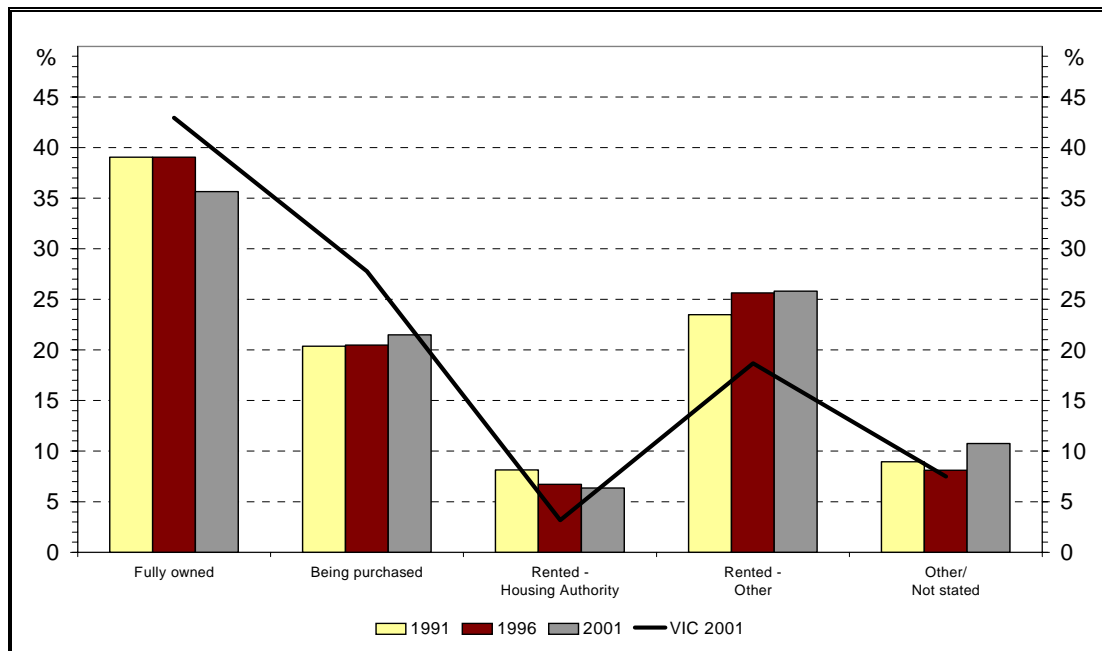
Figure 2.20
Mean Taxable Income, City of Maribyrnong and Victoria: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

Census data indicates that home ownership is relatively low in Maribyrnong, with 36 per cent of occupied private dwellings in 2001 being fully owned compared to 43 per cent of all occupied private dwellings in Victoria. Consequently, a much higher proportion of the City of Maribyrnong's dwellings were being rented than for the State as a whole (33 per cent versus 22 per cent).

Figure 2.21
Household Tenure Type, City of Maribyrnong: 1991, 1996 & 2001
Per cent of Occupied Private Dwellings



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.3.4 Recreation and Gambling for City of Maribyrnong

The characteristics of the gambling environment in the City of Maribyrnong are summarised in Table 2.5. Maribyrnong is classified as a highly vulnerable community and was recently identified as such for the purposes of the policy of regional caps within 5 local government communities. An important feature of the gambling environment is that the location of venues are "within the central corridor which has been identified as the least affluent".⁴ The high concentration of machines and their location within the LGA of Maribyrnong provides, that approximately 70 per cent of the population (in 2003) are within one kilometre of a venue.

There is now considerable evidence to support the tentative finding of the Productivity Commission (1999) of a correlation between problem gambling and the availability of gaming machines. The proximity of the bulk of the population to venues and machines in Maribyrnong does contribute to higher exposure to gambling, higher accessibility and much higher cumulative losses on a per capita basis.

⁴ Marshall, D.C., and R.G.V. Baker, (2001), p. 26.

Table 2.5
Gambling Indicators for City of Maribyrnong, 2003-04

Venues: 2004 ¹	13
EGMs: 2004	705
EGMs per 1,000 adults (2003-04) ^a	13.1
Gaming Losses 2003/04, \$ million	\$56.6
Losses per Adult 2003-04	\$1,054
Cumulative Losses since 1992-93 (\$ millions: adjusted to 2004 dollars)	\$623
Cumulative Losses per Adult since 1992-93 (adjusted to 2004 dollars)	\$11,601

Note: ¹ Number of electronic gaming machines at 30 June 2004 in hotels and clubs.

Source: Victorian Local Government Association.

The City of Maribyrnong is one of five Victorian designated regions (plus some surrounding postcodes) where caps on the number of gaming machines in the region were introduced in February 2002. There were 13 licensed venues with gaming machines operating in Maribyrnong in 2004. Data from the Victorian Commission for Gambling Regulation indicates that the City of Maribyrnong was ranked second of all Victorian local government areas in terms of the number of EGMs per 1,000 adults, gaming losses per adult, and cumulative losses per adult since 1992-93. The number of gaming machines in the region dropped from 801 in the December quarter 1999 to 707 in the June quarter 2004. Net gaming revenue per machine increased from \$6,278 to \$6,768 over this period, with net gaming revenue per machine in the June quarter being slightly below the Victorian average of \$7,088.

Two thirds of residents purchased a lottery ticket in the last year, while 28 per cent had wagered at the TAB. Only 8 per cent of residents had attended the Crown Casino in the last year, whereas 20 per cent had played EGMs in a hotel or licensed club.

2.4 City of Belmont, Western Australia

The City of Belmont covers 40 square kilometres, and is located about 4.5 kilometres east of the Perth CBD. It is bounded to the north-west by the Swan River, to the north-east by Perth International Airport, to the east by Forrestfield industrial area, and to the south by Kewdale industrial area.

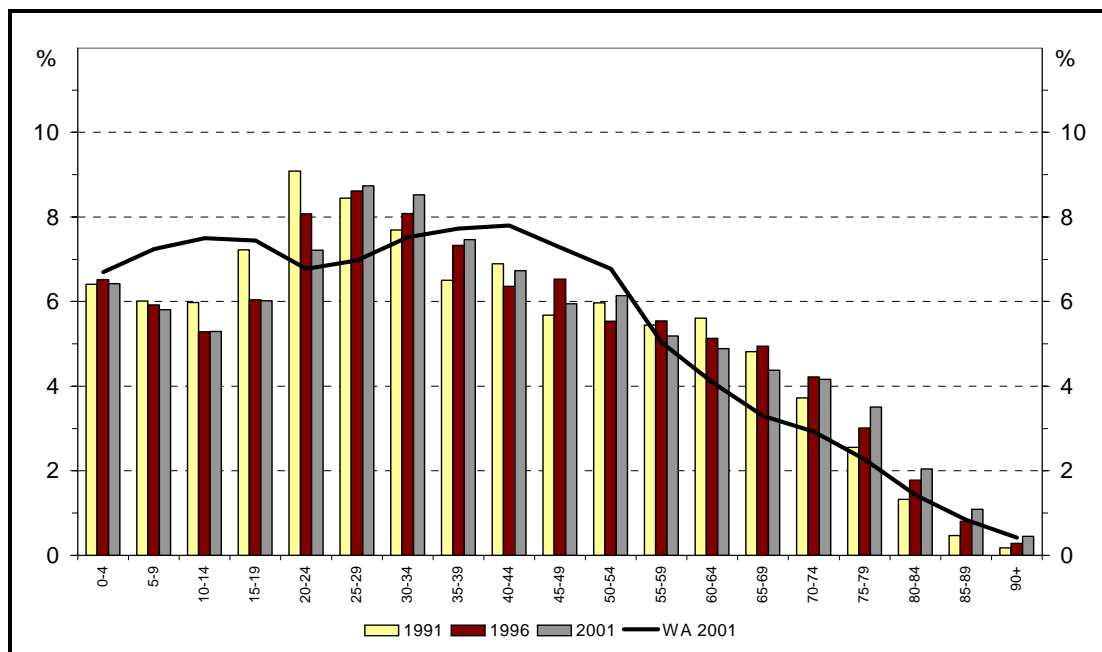
2.4.1 The People

The City of Belmont had a resident total population of about 28,700 persons at the time of the 2001 Census according to the Usual Residents Profile. About 79 per cent of the population were of adult age. More recent data from the ABS indicates that Belmont had an estimated resident population of 30,451 at 30 June 2003, which was 0.6 per cent or 188 persons higher than at the same time a year earlier. The population for the State as a whole is estimated to have grown more strongly over this period (by 1.4 per cent).

The Usual Residents Profile indicates that 3.3 per cent of the population in Belmont were indigenous in 2001, which is consistent with the average for the State as a whole (3.2 per cent).

The age distribution of the Belmont population is slightly different to the overall State distribution with a higher proportion of people between the ages of 20 and 34 years (24 per cent c.f. 21 per cent), and 65 years and over (16 per cent c.f. 11 per cent). A relatively greater share of people of retirement age is reflected in data on age pension recipients. An equivalent of almost 13 per cent of the estimated resident population in Belmont was receiving the age pension at June 2002 compared to 7.9 per cent of the Western Australian population. In terms of under-representation, Belmont has a significantly smaller proportion of people aged between 35 and 54 years compared with the State overall.

Figure 2.22
Age Distribution, City of Belmont: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Table 2.6
Country of Birth, City of Belmont: 1991, 1996 & 2001
(Per cent)

	Belmont 1991	Belmont 1996	Belmont 2001	WA 2001
Australia	66.1	65.0	63.9	67.1
United Kingdom	12.5	10.8	9.8	10.9
New Zealand	2.5	2.5	2.9	2.4
Italy	1.9	1.7	1.4	1.2
India	1.6	1.5	1.4	0.7
Malaysia	0.9	0.8	0.9	0.9
Poland	1.0	0.9	0.8	0.3
Singapore	0.6	0.6	0.8	0.6
Germany	0.9	0.7	0.7	0.5
Netherlands	0.9	0.8	0.6	0.6

Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Data from the 2001 Census indicates that a slightly smaller proportion of Belmont residents were born in Australia than for the average for the State as a whole (64 per cent c.f. 67 per cent). The most common overseas countries in which Belmont residents surveyed in 2001 were born were the United Kingdom (9.8 per cent of residents), New Zealand (2.9 per cent), Italy (1.4 per cent) and India (1.4 per cent). A breakdown of the top 10 countries in which Belmont and Western Australian residents were born is presented in Table 2.6.

A significantly smaller proportion of residents of Belmont in 2001 were married (43 per cent) compared to the population for the State overall (51 per cent). While this partly reflects that a slightly larger proportion of the Belmont population has never been married (35 per cent c.f. 33 per cent), it also reflects that a slightly larger proportion of people in Belmont are separated or divorced (14 per cent c.f. 11 per cent).

The average level of educational attainment for the Belmont population appears to be lower than for the State average with 33 per cent of persons aged 15 years and over in the region having completed Year 12 or an equivalent as their highest level of schooling compared to 38 per cent of the equivalent Western Australian population.

2.4.2 The Local Economy

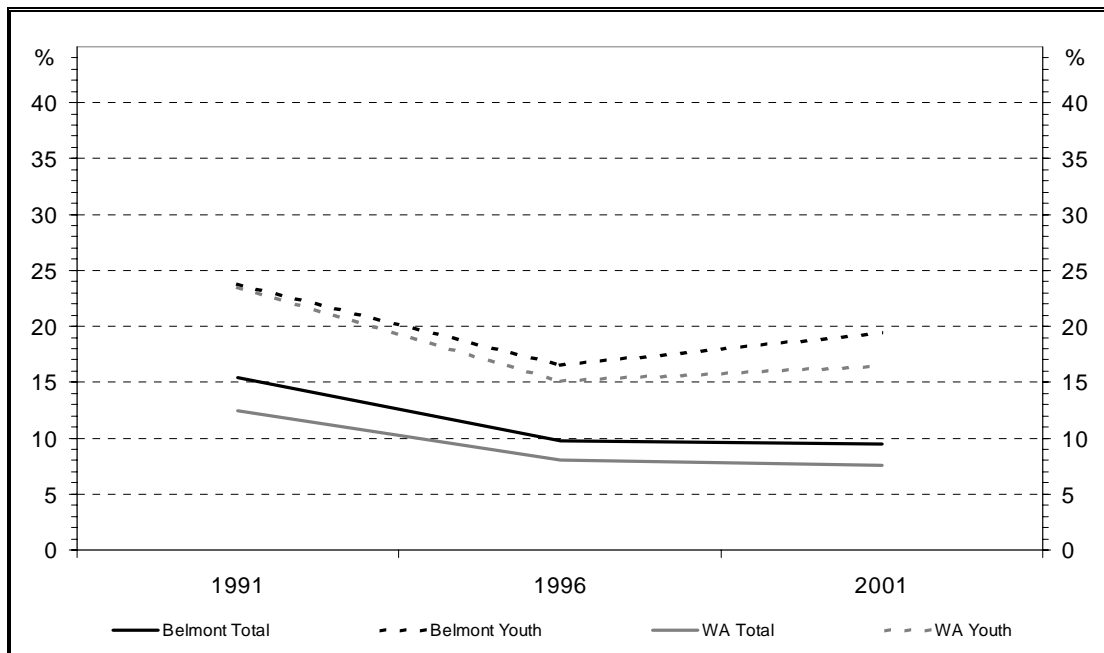
Unemployment in the City of Belmont at the time of the last Census was higher than for the State as a whole. The unemployment rate in the City was 9.5 per cent in 2001 compared to 7.5 per cent for the State. As Figure 2.23 shows, the unemployment rate in Belmont has been consistently higher than the unemployment rate for Western Australia in each of the past three Census periods. More recent estimates indicate that unemployment still remains relatively high. Department of Employment and Workplace Relations (DEWR) Small Area Labour Markets data (i.e., smoothed series) indicates that in the September quarter of 2004, Belmont had an unemployment rate of 8.2 per cent compared to a Statewide unemployment rate of 5.4 per cent.

Youth unemployment (i.e., persons aged 15 to 19 years) has also been higher than for the State overall. The youth unemployment rate in Belmont in 2001 was 19.5 per cent compared to the State average of 16.4 per cent. Trends in youth unemployment in the City of Belmont have been closely aligned with movements in the State unemployment rate over the past three Census years (see Figure 2.23).

Belmont has a mixture of residential and light industry, and is well served with large shopping areas. In geographical terms the City of Belmont is dominated by the domestic and international airport which accounts for 33 per cent of total land use in the region.⁵ Residential uses account for about 23 per cent of total land use in the region, while industrial uses account for about 6 per cent, and mixed use and commercial also about 6 per cent.

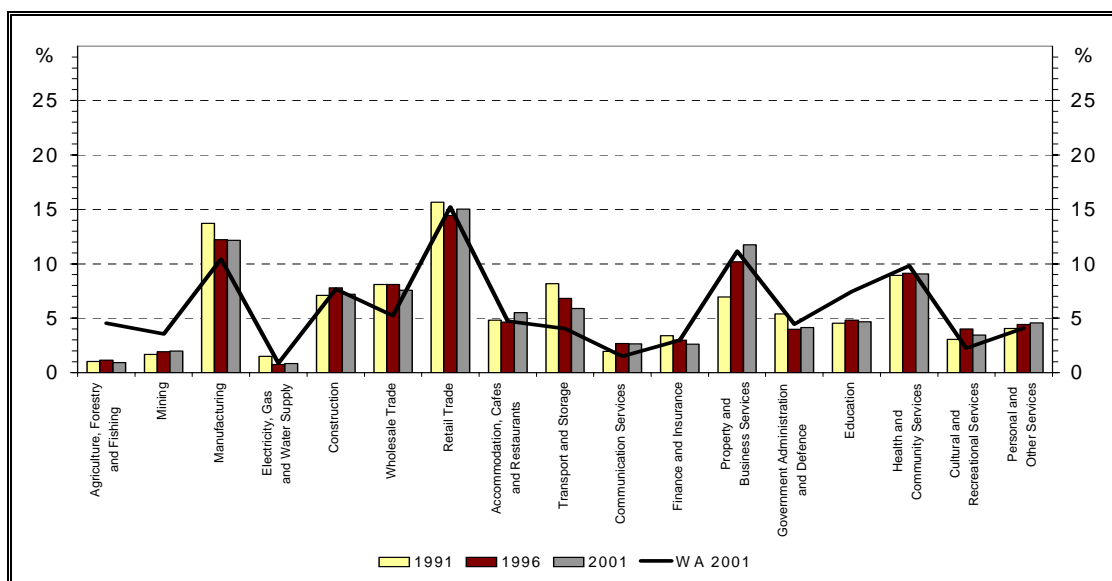
⁵ City of Belmont, Land Uses in City, [Online], Available: <http://www/belmont.wa.gov.au/scripts/viewarticle.asp?NID-342> [2005, February 3].

Figure 2.23
Unemployment Rate, City of Belmont: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Figure 2.24
Employment by Industry, City of Belmont: 1991, 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.

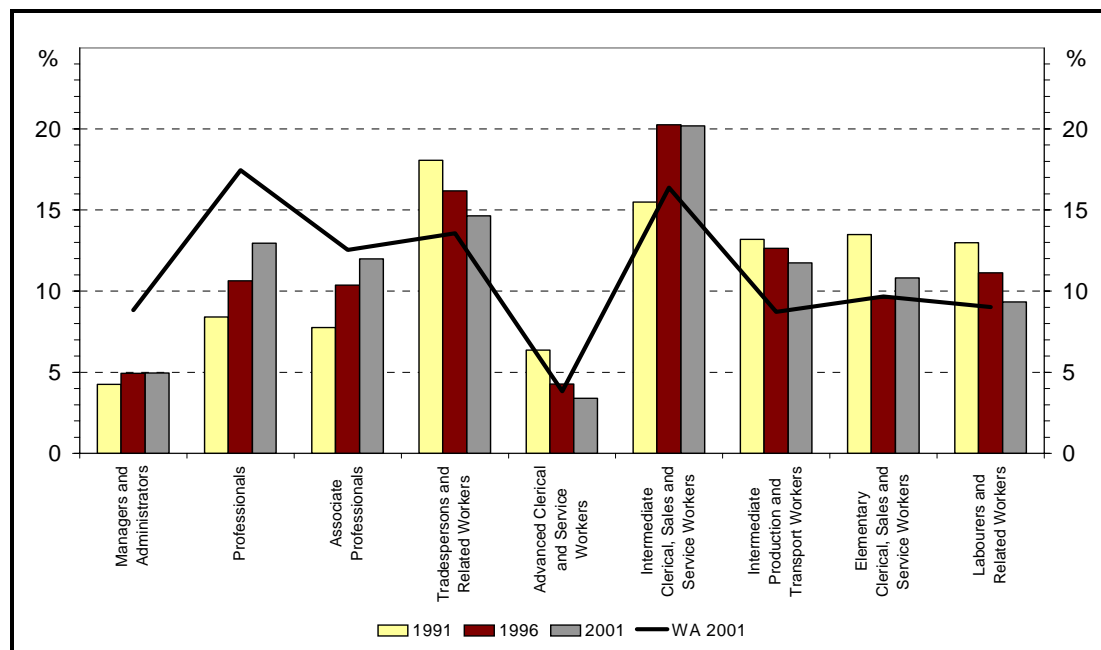
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Figure 2.24 shows a proportional breakdown of employment by industry for Belmont for the last three Census years, and for Western Australia for 2001. Retail trade (15 per cent of employed persons), manufacturing and property and business services (12 per cent respectively) were the three largest employing industry sectors in the City of Belmont in 2001. Compared to the industry profile for the State as a whole, Belmont has a relatively larger share of persons employed in manufacturing, transport and storage, and wholesale trade. relatively greater employment in the last two sectors reflects the impact of the airport on the structure of employment in the region. Belmont has a relatively

smaller share of persons employed in agriculture, forestry and fishing, education, and mining.

The industrial structure of the Belmont economy in terms of employment by industry remained relatively stable from 1991 to 2001 (see Figure 2.24). The most significant changes were a fall in the share of persons employed in the transport and storage sectors, which was offset by a strong increase in persons employed in the property and business services sector.

Figure 2.25
Employment by Occupation, City of Belmont: 1991, 1996 & 2001*



Note: * Proportions have been calculated excluding inadequately described and not stated.

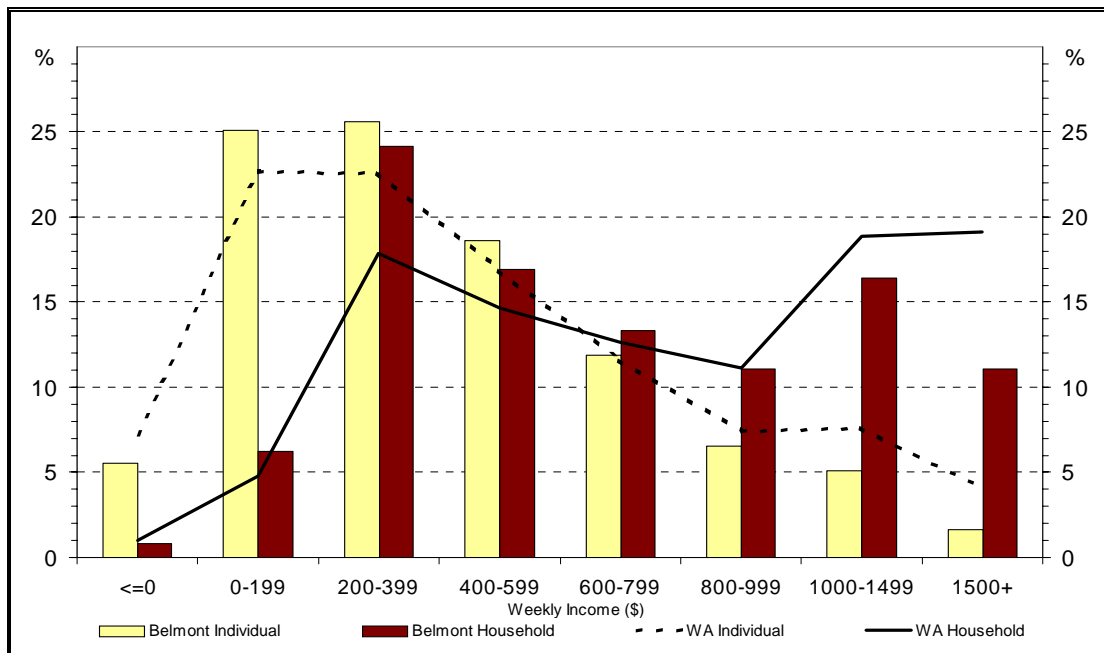
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Figure 2.25 shows the occupational profile of the Belmont and Western Australian workforces. Reflecting the different industrial structures of the two economies, Belmont has a relatively larger share of persons employed as intermediate clerical, sales and service workers, intermediate production and transport workers, and as tradespersons and related workers. On the other hand Belmont has a relatively smaller share of persons employed as managers and administrators, and as professionals.

2.4.3 Income Distribution

Census data on incomes indicate that the socio-economic status of the Belmont population is below that of the State average. In 2001, about 25 per cent of persons aged 15 years and over were earning a weekly individual income of \$600 per week or more compared to almost 31 per cent of the relevant State population. Furthermore, 52 per cent of households in Belmont had a weekly household income of \$600 per week or more compared to 62 per cent of all households in Western Australia. (The pattern of individual and household incomes for Belmont and Western Australia are illustrated in Figure 2.26.)

Figure 2.26
Income Distribution of Households and Individuals, City of Belmont: 2001*

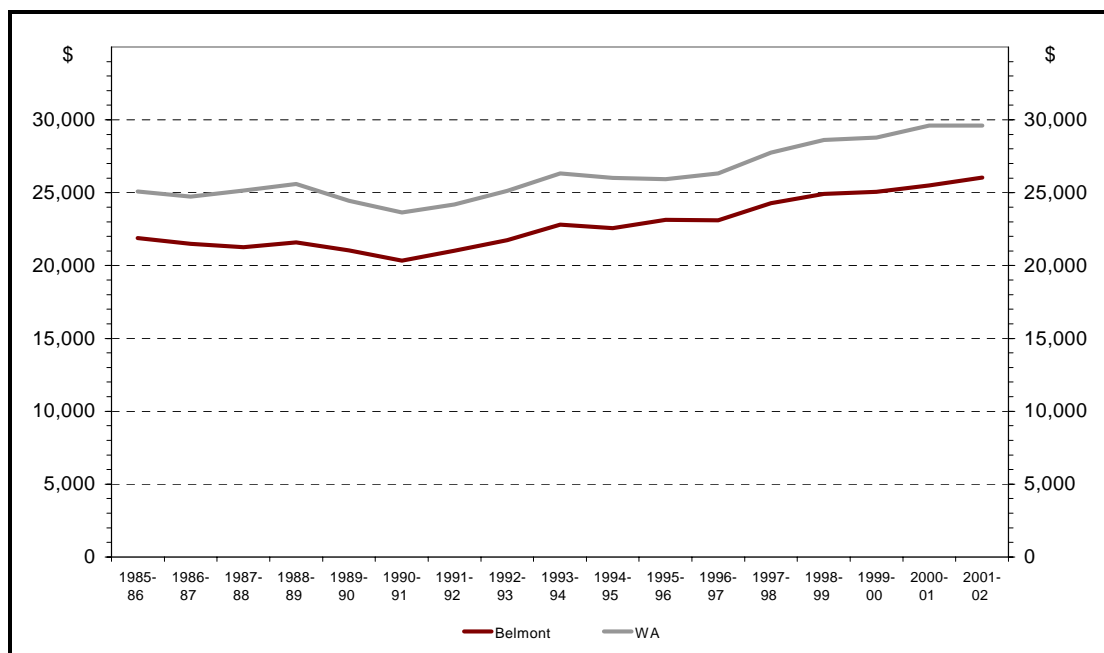


Note: * Proportions have been calculated excluding those who did not state their income and/or only stated partial income.

Source: ABS, 2001 Census Basic Community Profiles.

ATO mean individual taxable income data for the past 17 years indicates that average taxable income in the City of Belmont has trended slowly upward along with the Western Australian average since 1990-91 but has consistently remained \$3,000 to \$4,000 lower in real terms than the State average (see Figure 2.27).

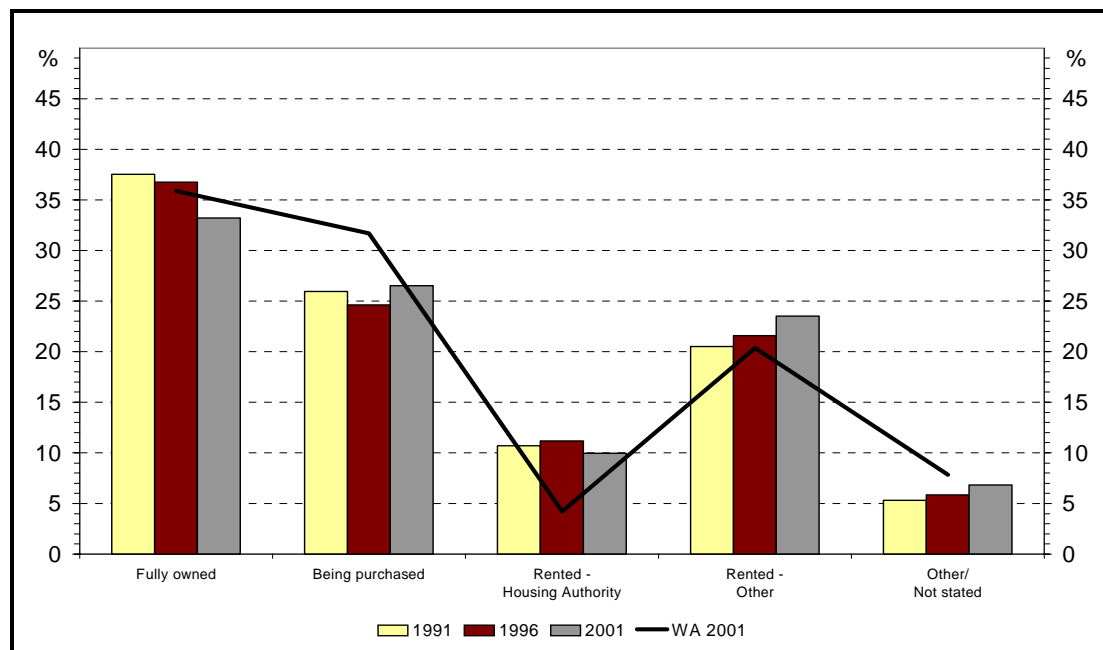
Figure 2.27
Mean Taxable Income, City of Belmont: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

Home ownership is slightly lower in the City of Belmont with 33 per cent of households owning their residence outright compared to 36 per cent of households in the State as a whole at the time of the 2001 Census (see Figure 2.28). Furthermore, almost 27 per cent of households in Belmont were in the process of purchasing their home in 2001 compared to almost 32 per cent of Western Australian households. A relatively large proportion of the City of Belmont's population were renting their home compared to the State average (34 per cent c.f. 25 per cent). Interestingly, a significantly higher proportion of households in Belmont were being rented from the State Housing Authority compared to the average for the State (10 per cent c.f. 4.2 per cent).

Figure 2.28
Household Tenure Type, City of Belmont: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.4.4 Recreation and Gaming

The City of Belmont is situated adjacent to both the Burswood Casino and the racecourses of Perth. The Casino, in particular, is a major source of recreation for City residents with many different forms of entertainment housed in the complex. The racecourse, too, provides significant entertainment, gambling and employment opportunities for the region. Located close to gambling and wagering opportunities suggest that the average spend on lotteries and scratch and wins of \$569 which is 4.0 times the State average would be significantly higher if expenditure on racing and casino games were included. Some 83 per cent of residents indicated they purchased a weekly lottery ticket, while Belmont had a high participation rate in wagering (43 per cent) and in EGMs (29 per cent) and table games (26 per cent) at the Casino.

There are no major café or nightclub regions in the City of Belmont but a new cinema complex opened a few years ago with a number of restaurants to cater for moviegoers and other persons. Many of the area's older hotels have closed but the local tavern has been modernised and is a popular location. A TAB outlet is housed in the tavern.

2.5 City of Greater Shepparton, Victoria

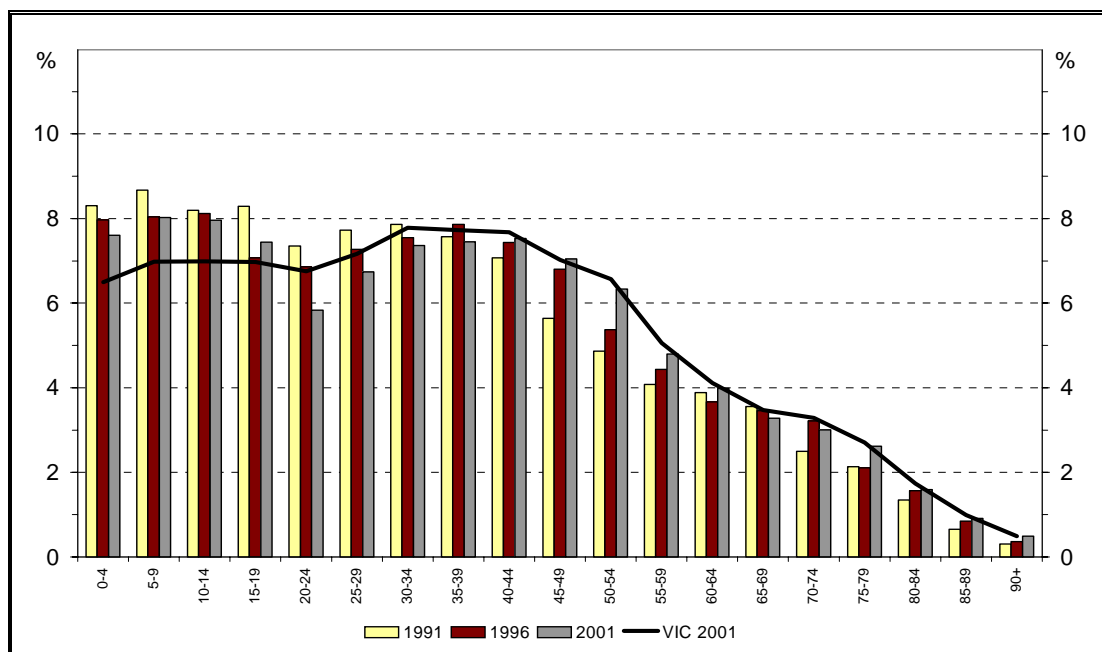
Greater Shepparton is the fifth largest provincial region in Victoria in terms of population size. Located in the Goulburn Valley about 180km north of Melbourne, Greater Shepparton covers an area of 2,422 square kilometres. It is located at the centre of a major agricultural and food processing region popularly known as the 'food bowl of Australia'.

2.5.1 The People

The City of Greater Shepparton had a total population of 56,085 people in 2001 according to the Census Usual Residents Profile. About 72 per cent of the population were of adult age. More recent preliminary estimates from the ABS indicate that Greater Shepparton had a total estimated resident population of 59,589 at 30 June 2003. The total population for the region is estimated to have increased by 1.3 per cent between June 2002 and June 2003, which is in line with the 1.2 per cent increase in total population for Victoria over this period.

Greater Shepparton has a relatively higher share of indigenous persons living in the region compared to the State with 2.6 per cent of the City's resident population indicating they were of Aboriginal and/or Torres Strait Islander descent at the 2001 Census.

Figure 2.29
Age Distribution, City of Greater Shepparton: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Figure 2.29 shows a comparison of the age distribution of the Greater Shepparton and Victorian populations at the time of the 2001 Census. The age distribution of the Greater Shepparton population matches closely with the Victorian distribution, though with more residents aged 19 years and less (31 per cent c.f. 27 per cent), and fewer aged 20 to 44 years (35 per cent c.f. 37 per cent). This would reflect the movement of young people

out of the region for post secondary education purposes and, perhaps also, career prospects.

Comparing ABS resident population estimates and Family and Community Services data on age pension recipients confirms the similar older age structure of the Greater Shepparton and Victorian populations: an equivalent of 9.4 per cent of the total population in Greater Shepparton in June 2002 received the age pension compared to 9.5 per cent of the Victorian population.

An important characteristic of the Greater Shepparton population is that a significantly higher proportion of residents in the region are born in Australia (84 per cent) relative to the Victorian average (71 per cent). This is illustrated by Census data presented in Table 2.7, which shows a breakdown of the Greater Shepparton and Victorian populations by their country of birth. Italy, the United Kingdom, New Zealand and Turkey were the leading sources of migrants for the Greater Shepparton region.

At the time of the 2001 Census, a slightly higher proportion of the City of Greater Shepparton's residents were married than for Victoria as a whole (54 per cent compared to almost 52 per cent for the State overall). The proportion of persons who are married has fallen in Greater Shepparton and Victoria over the past three Census periods (from 59 per cent and 56 per cent respectively in 1991).

Reflecting the rural nature of the region and the migration of younger people to pursue post secondary education opportunities, the average level of educational attainment in Greater Shepparton is considerably lower than the Victorian average. In 2001, 29 per cent of persons aged 15 years and over in Greater Shepparton indicated that their highest level of schooling completed (i.e., excluding post secondary education) was Year 12 or an equivalent compared to 39 per cent of all Victorians.

Table 2.7
Country of Birth, City of Greater Shepparton: 1991, 1996 & 2001
(Per cent)

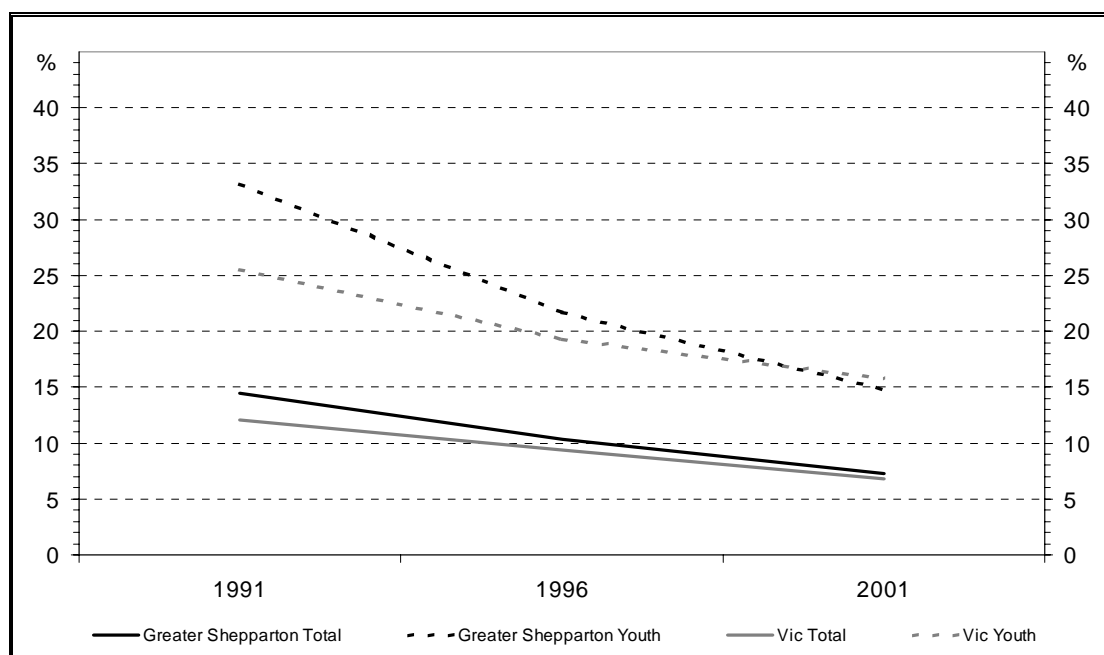
	Greater Shepparton 1991	Greater Shepparton 1996	Greater Shepparton 2001	Vic 2001
Australia	88.7	86.9	84.1	70.6
Italy	3.1	2.7	2.3	1.9
United Kingdom	2.5	2.2	2.0	4.4
New Zealand	0.6	0.7	0.8	1.2
Turkey	0.3	0.6	0.6	0.3
Iraq	0.0	0.0	0.5	0.1
Netherlands	0.6	0.5	0.4	0.5
Greece	0.6	0.5	0.4	1.2
India	0.1	0.2	0.3	0.7
Philippines	0.2	0.2	0.2	0.5

Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.5.2 The Local Economy

The unemployment rate in the City of Greater Shepparton has converged to the State average over the last three Census periods (see Figure 2.30 which shows the evolution in the overall and youth unemployment rates). In 2001, 7.3 per cent of the labour force was unemployed compared to 6.8 per cent of the Victorian labour force. The City of Greater Shepparton had a slightly lower youth unemployment rate than Victoria in 2001 (14.8 per cent c.f. 15.8 per cent). More recent estimates of unemployment indicate that overall unemployment in Greater Shepparton municipality has fallen below the Victorian average. Using DEWR Small Area Labour Market data, it is estimated that the unemployment rate in the Greater Shepparton local government area was 5.2 per cent in the September quarter 2004 compared to a State average of 5.7 per cent.

Figure 2.30
Unemployment Rate, City of Greater Shepparton: 1991, 1996 & 2001



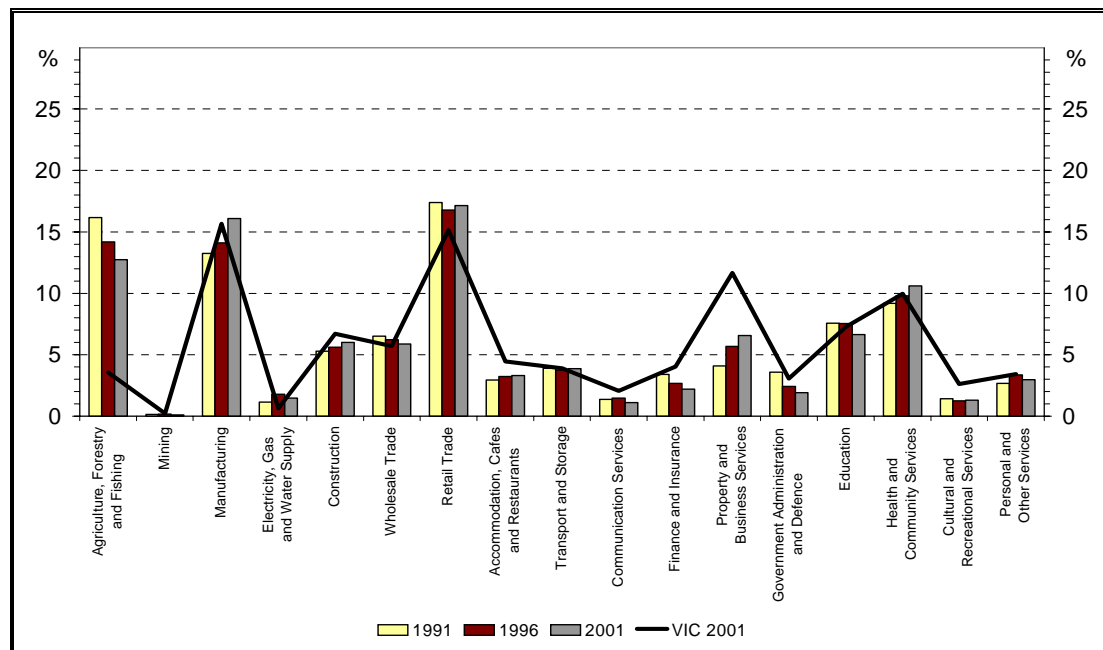
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

The primary driver of the Greater Shepparton economy is agriculture, including the dairy, orchards and viticulture industries. The Goulburn Valley produces around one quarter of Victoria's total agricultural production. Shepparton also acts as a regional commercial centre which serves a wider regional population of approximately 160,000 people. Other industries in the Greater Shepparton area include food processing (e.g., fruit and vegetable canning) and manufacturing. There are two large canneries located in the municipality. The road transport industry is one of the most important industries in Shepparton. While the tourism industry is small, it represents a growing share of the local economy.

Figure 2.31 gives insight into the economic profile of the Greater Shepparton economy. It shows a proportional breakdown of employment by industry for the City of Greater Shepparton for the last three Census years, and a comparison against Victoria for 2001. Reflecting the importance of agricultural industries to the Greater Shepparton economy, a significantly higher share of persons in the region were employed in agriculture in 2001

compared to the average for Victoria (13 per cent c.f. 3.6 per cent). The other main difference in the broad industry structure of the Greater Shepparton workforce compared to the Victorian workforce is that Greater Shepparton has a relatively smaller share employed in property and business services (6.6 per cent c.f. 11.7 per cent). Other major employing industries in Greater Shepparton in 2001 were retail trade (17 per cent) and manufacturing (16 per cent).

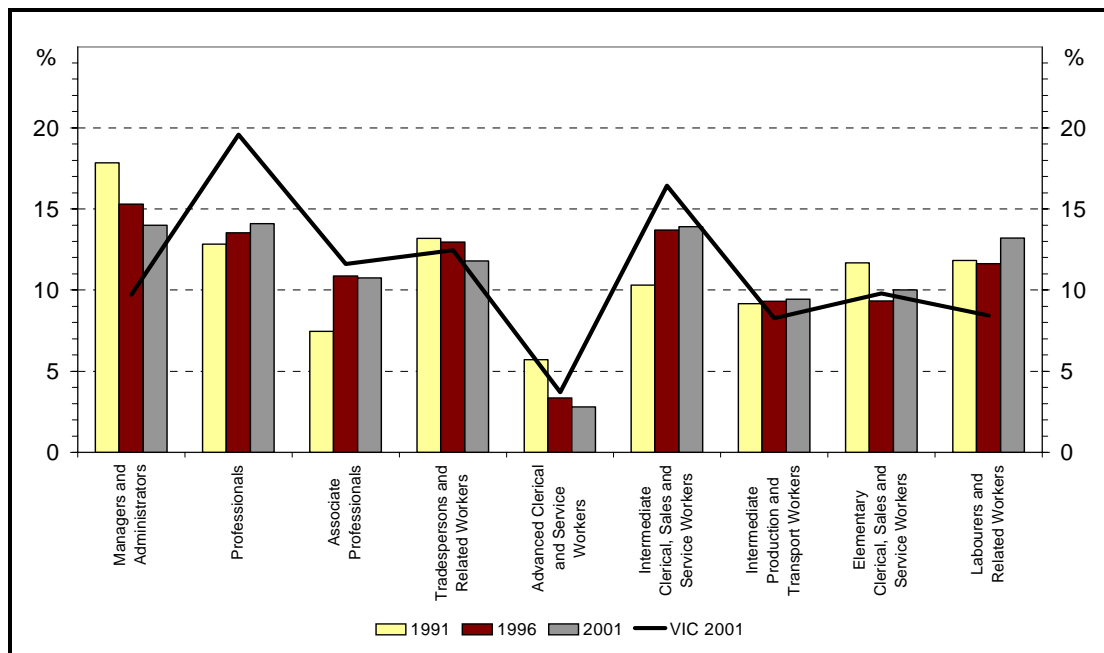
Figure 2.31
Employment by Industry, City of Greater Shepparton: 1991, 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

The occupational profile of the Greater Shepparton and Victorian workforces is illustrated in Figure 2.32. The City of Greater Shepparton was considerably under-represented in professionals in the 2001 Census compared to the Victorian average (14 per cent of employed persons versus 20 per cent) while the region had a higher proportion of persons employed as managers and administrators and labourers and related workers than for the State as a whole. The relatively greater share of persons employed as managers would reflect a greater prevalence of farm managers in Greater Shepparton.

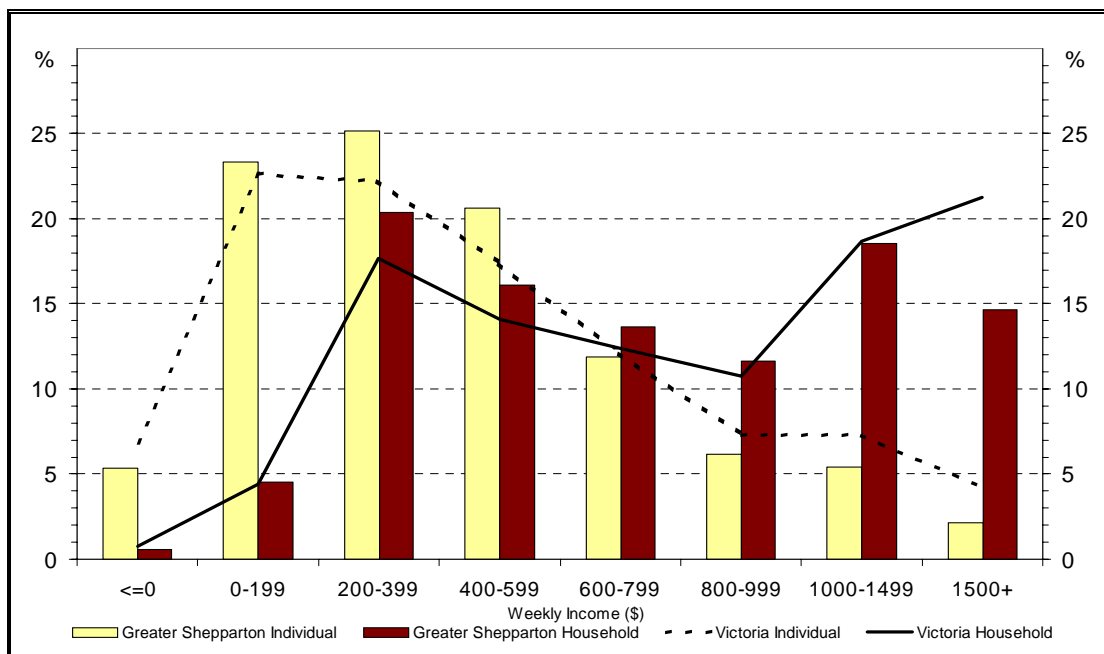
Figure 2.32
Employment by Occupation, City of Greater Shepparton: 1991, 1996 & 2001*



Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.5.2 Income Distribution

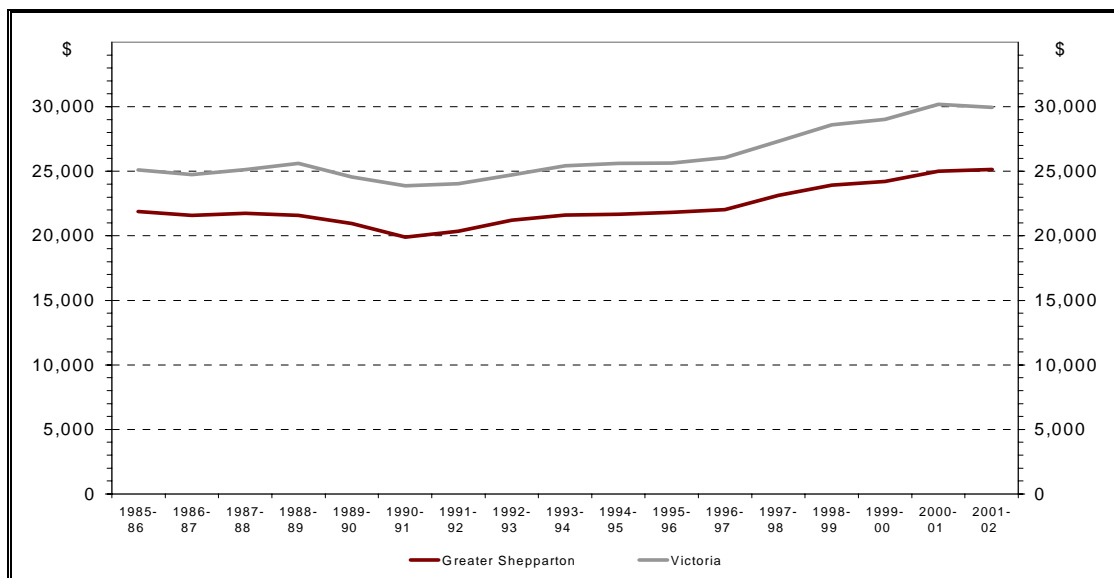
Figure 2.33
Income Distribution of Households and Individuals, City of Greater Shepparton: 2001*



Note: * Proportions calculated excluding those who did not state their income and/or only stated partial income.
Source: ABS, 2001 Census Basic Community Profiles.

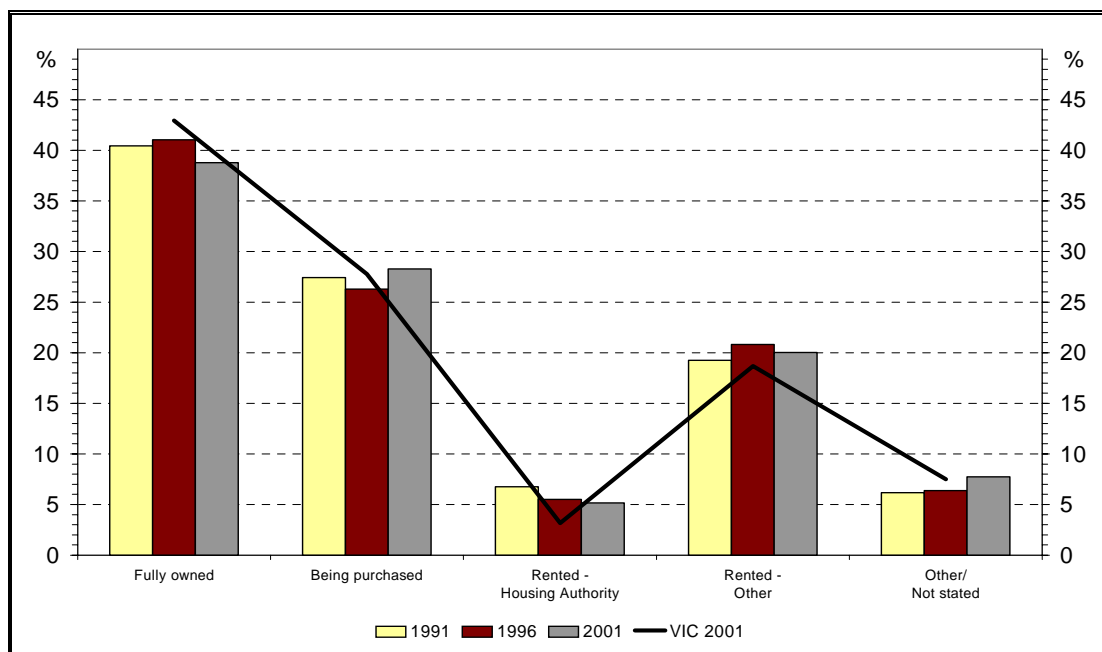
Figure 2.33 shows that the income distribution of households and individuals in Greater Shepparton is broadly similar to that for Victoria. However, the income distribution of individuals and households in Greater Shepparton is weighted more heavily towards the lower tail than for the State overall with a higher proportion of Greater Shepparton individuals earning less than \$600 per week than the State average in 2001 (74 per cent c.f. 69 per cent). Data from the ATO indicates that the mean taxable income for the City of Greater Shepparton has consistently been between \$3,000 and \$5,000 lower than the mean taxable income for Victoria as a whole since 1985-86 (see Figure 2.34).

Figure 2.34
Mean Taxable Income, City of Greater Shepparton: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

Figure 2.35
Household Tenure Type, City of Greater Shepparton: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

The distribution of households by tenure type in the City of Greater Shepparton in 2001 was similar to the distribution in Victoria (see Figure 2.35). However, slightly fewer Shepparton households fully owned their own homes (39 per cent c.f. 43 per cent), while slightly more were renting than for the State as a whole (26 per cent c.f. 22 per cent).

2.5.3 Recreation and Gambling for City of Greater Shepparton

The characteristics of the gambling environment for the City of Greater Shepparton are summarised in Table 2.8.

Table 2.8
Gambling Indicators for City of Greater Shepparton, 2003-04

Venues: 2004 ¹	7
EGMs: 2004	339
EGMs per 1,000 adults (2003-04)	8.0
Gaming Losses 2003/04, \$ million	\$25.4
Losses per Adult 2003-04	\$602
Cumulative Losses since 1992-93 (\$ millions: adjusted to 2004 dollars)	\$223
Cumulative Losses per Adult since 1992-93 (adjusted to 2004 dollars)	\$5,294

Note: ¹ Number of electronic gaming machines at 30 June 2004 in hotels and clubs.

Source: Victorian Local Government Association.

Gaming machines would appear to be an important source of entertainment in the region. According to data from the Commission for Gambling Regulation, there were 7 venues with 339 gaming machines in the region as at 30 June 2004. The number of gaming machines per 1,000 adults in the region at this time (7.68) was slightly higher than the Victorian country average (7.15) and the Victorian overall average (7.11). While three quarters of all residents had purchased a lottery ticket in the last year and one-third indicated they had played the poker machines, only 3.0 per cent of Greater Shepparton residents had attend the Crown Casino.

2.6 City of Albany, Western Australia

The City of Albany is Western Australia's oldest settlement. It is located on the south coast of Western Australia 409km south of Perth. The City of Albany is composed of an urban centre which acts as the primary administrative and service centre to the Great Southern region of Western Australia. The City of Albany accounts for about 60 per cent of the population located in the Greater Southern region.

2.6.1 The People

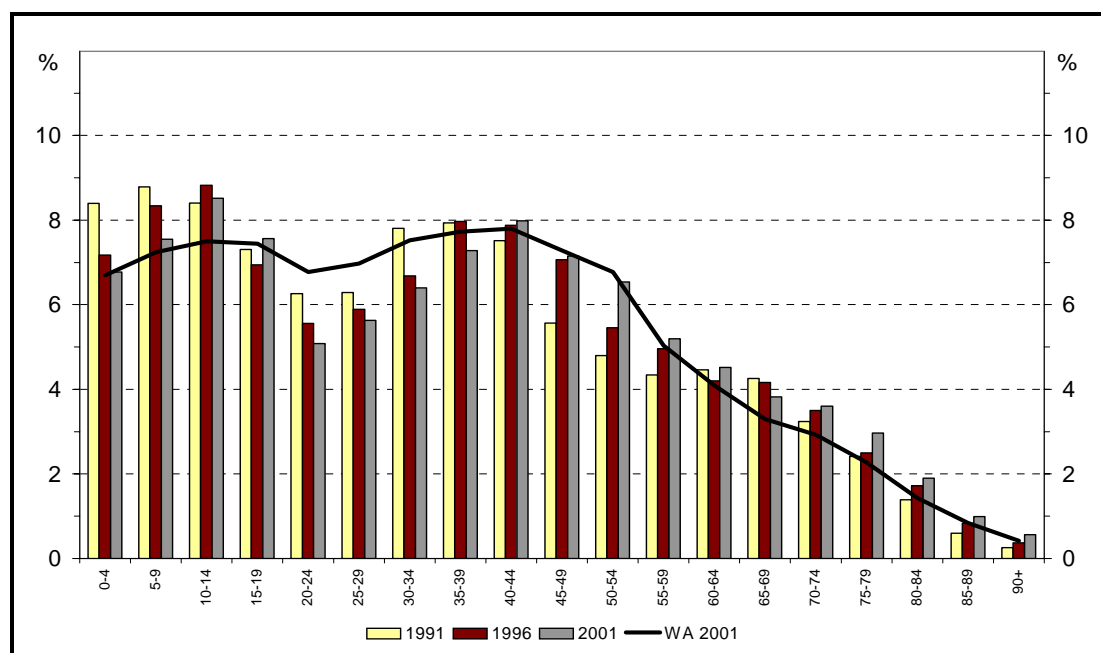
The City of Albany had a total population of 29,736 people at the time of the 2001 Census. About 73 per cent of the population were of an adult age. More recent preliminary estimates from the Australian Bureau of Statistics indicates that Albany had a resident population of 31,550 at 30 June 2003. The population of the region is estimated to have increased by 0.4 per cent between 2002 and 2003. This is weaker than the

percentage increase in the total Western Australian population over this period (1.4 per cent).

Indigenous representation among the City of Albany population is only marginally lower than for the State average. 2.8 per cent of the population of Albany were of indigenous origin in 2001 compared to 3.2 per cent of the total Western Australian population.

Figure 2.36 illustrates the age structure of the Albany population for the last three Census years and the age structure of the Western Australian population in 2001. The median age of the Albany population at the time of the most recent Census (36 years) was slightly higher than the Western Australian average (34 years). A relatively higher proportion of the Albany population were aged 55 and over (24 per cent c.f. 20 per cent), while a considerably lower proportion were aged from 20 to 39 years (24 per cent c.f. 29 per cent). This latter feature probably reflects that a significant proportion of the Albany population in younger age groups leave the region to pursue post-secondary education opportunities and/or employment opportunities. The relatively high proportion of the Albany population in older age groups is confirmed by Family and Community Services data on age pensions recipients, which indicates that an equivalent of 9.8 per cent of the total population at 30 June 2002 was receiving the age pension compared to 7.9 per cent of the Western Australian population.

Figure 2.36
Age Distribution, City of Albany: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Albany residents are far more likely to have been born in Australia than residents in the State as a whole (see Table 2.9). 2001 Census data indicates that 78 per cent of the Albany population was born in Australia compared to the overall State average of 67 per cent. Just over half of those born overseas migrated from the United Kingdom, while New Zealand and the Netherlands were the next most significant countries of origin.

Table 2.9
Country of Birth, City of Albany: 1991, 1996 & 2001
(Per cent)

	Albany 1991	Albany 1996	Albany 2001	WA 2001
Australia	79.1	78.0	78.1	67.1
United Kingdom	11.7	11.0	9.9	10.9
New Zealand	0.9	1.0	1.3	2.4
Netherlands	1.4	1.1	1.0	0.6
Germany	0.8	0.7	0.7	0.5
Italy	0.8	0.8	0.6	1.2
United States of America	0.3	0.3	0.3	0.3
Poland	0.5	0.4	0.3	0.3
South Africa	0.3	0.2	0.3	0.8
Philippines	0.3	0.2	0.2	0.3

Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

A slightly larger proportion of people in Albany in 2001 were married compared to the State average (53 per cent c.f. 51 per cent). This difference was accounted for by a smaller proportion of the Albany population being never married (29 per cent c.f. 33 per cent); the proportion of the population that was separated or divorced was similar for Albany and the State.

Like most regional areas, the average level of educational attainment in the City of Albany is relatively lower than the Western Australian average. Approximately 31 per cent of persons aged 15 years and over in Albany in 2001 had completed Year 12 or an equivalent, while the comparative figure for the State was 38 per cent.

2.6.2 The Local Economy

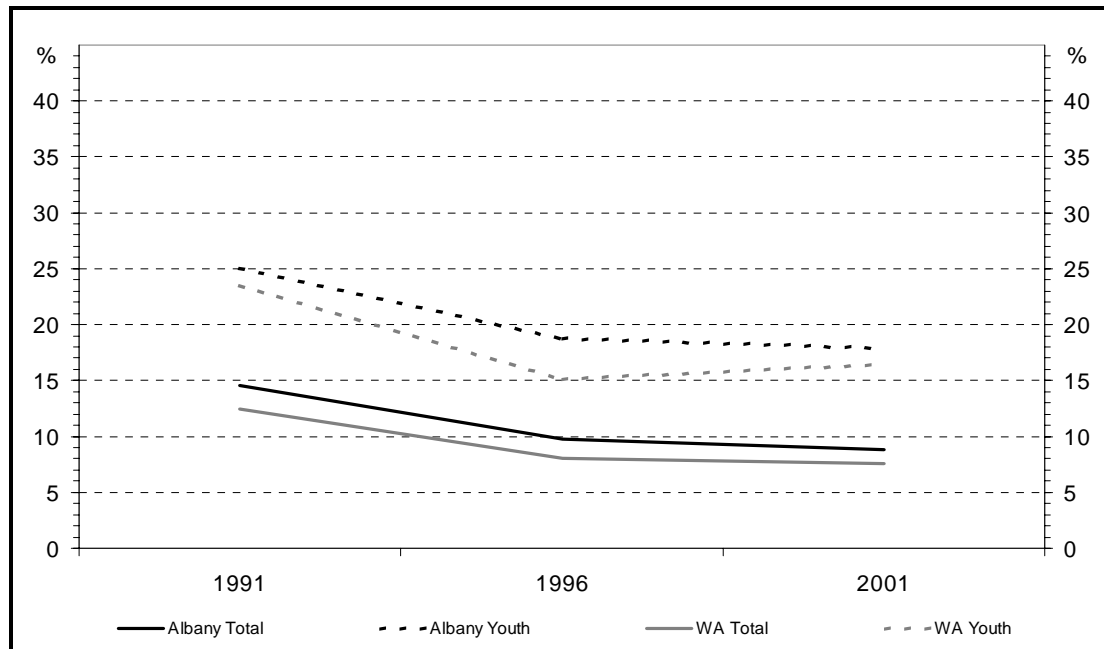
In 2001, the unemployment rate in the City of Albany was slightly higher than the rate for Western Australia (8.8 per cent c.f. 7.5 per cent). Youth unemployment (i.e., among 15 to 19 year olds) was also slightly higher; 17.9 per cent of Albany's youth labour force was unemployed compared to 16.4 per cent for the State. Figure 2.37 shows that unemployment has remained relatively higher in Albany compared to the State as a whole over the three most recent Census periods.

More recent estimates of unemployment based on DEWR Small Area Labour Markets data indicates that unemployment remains relatively high in the Albany local government area. It is estimated that unemployment in the region stood at 8.1 per cent in the September quarter 2004 compared to 5.4 per cent for the State, and 5.6 per cent for the non-metropolitan area of Western Australia as a whole.

Primary industries play a key role in the Albany regional economy. The Great Southern Region is the second largest producer of agricultural commodities in Western Australia, which includes extensive broad-acre cropping, wool, horticulture and fishing. Commercial activity in the region has been increasing, and tourism is growing strongly and will play a key role in the development of the city into the future. Albany is also a regional administrative centre for many of the State and Commonwealth agencies. As a prominent regional economy, transport plays a prominent role in the economy; Albany

Port is the major node from where much of the agricultural production in the region is transported.

Figure 2.37
Unemployment Rate, City of Albany: 1991, 1996 & 2001

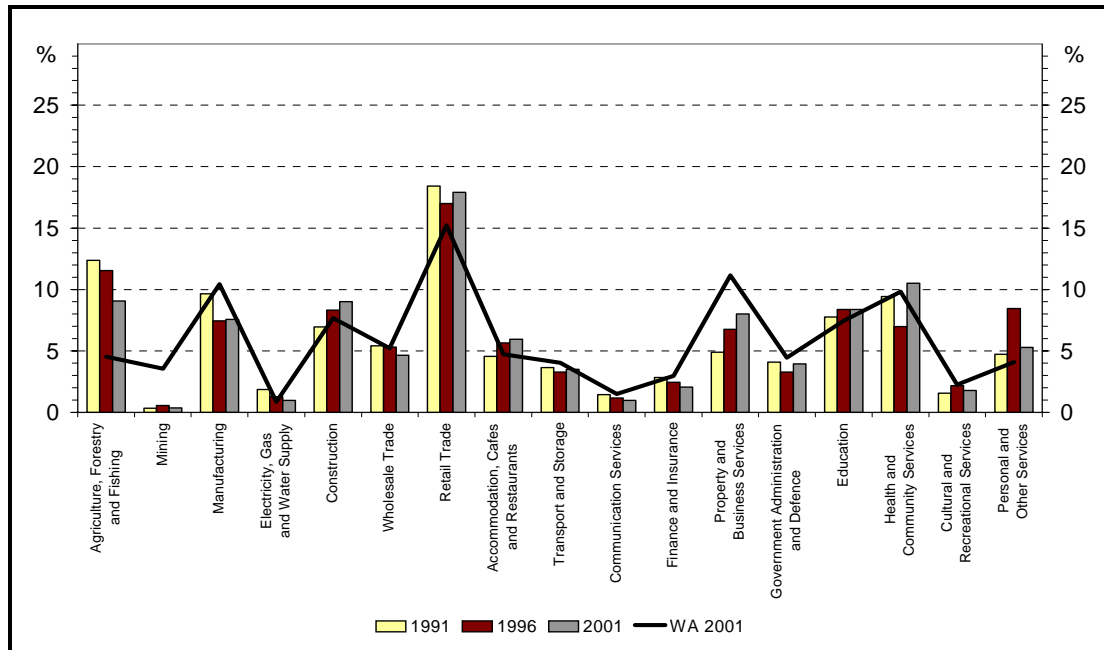


Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Figure 2.38 shows a proportional breakdown of employment by industry for Albany for the last three Census periods, and for Victoria for the 2001 Census. Retail trade was the largest employing industry in Albany in 2001, accounting for 18 per cent of all people employed in the region. This is relatively higher than the proportion of persons employed in retail trade for the State as a whole (15 per cent). Other significant employing industries in Albany are health and community services (10 per cent of workers), agriculture, forestry and fishing (9.1 per cent) and construction (9.0 per cent). The industrial profile of the Albany workforce is broadly similar to the State profile. Retail trade and agriculture, forestry and fishing are the two industries in which Albany has a relatively higher share of persons employed, while Albany has a relatively lower proportion of people employed in mining, property and business services, and manufacturing.

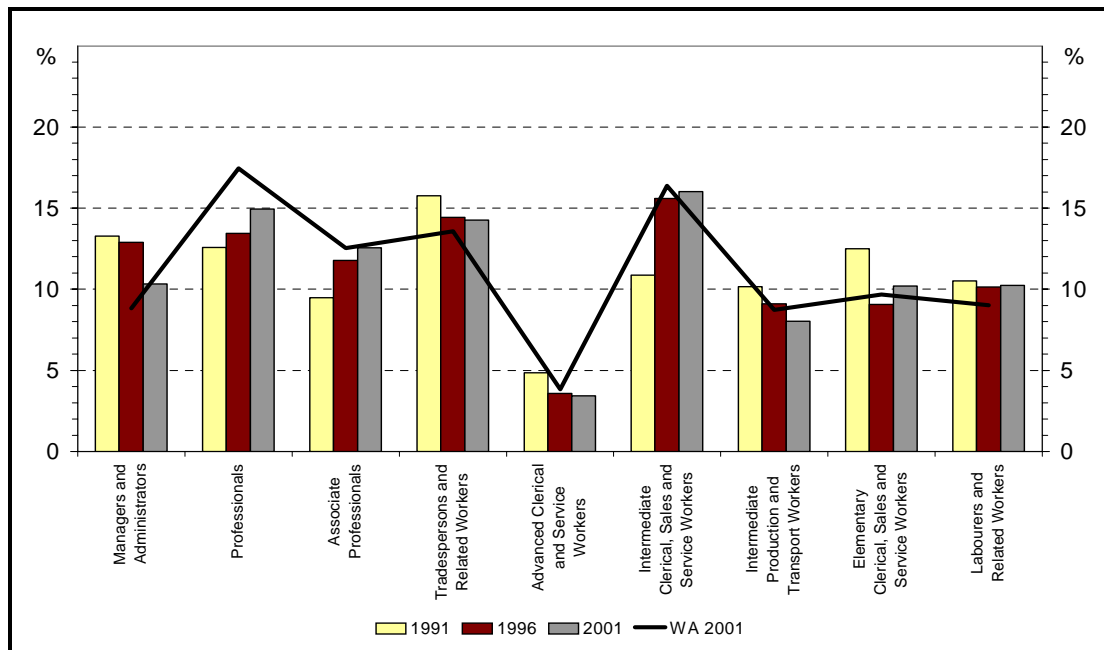
The occupational profile of the Albany and Western Australian workforces is illustrated by Figure 2.39. In 2001, the distribution of workers by occupation was similar in Albany to Western Australia with the exception of professionals who were under-represented in the City of Albany (they accounted for 15 per cent of persons employed compared to 17 per cent for the State). Albany had a slightly higher proportion of workers employed as managers and administrators, and as labourers and related workers compared to the State in 2001.

Figure 2.38
Employment by Industry, City of Albany: 1991, 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Figure 2.39
Employment by Occupation, City of Albany: 1991, 1996 & 2001*

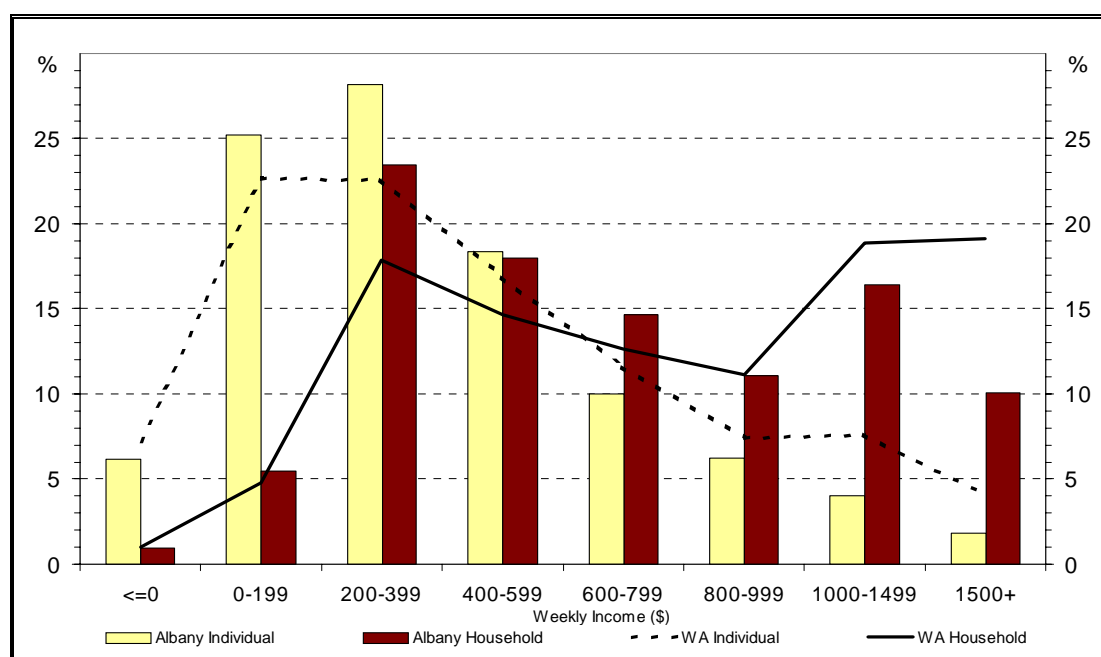


Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.6.3 Income Distribution

Census data on household and individual incomes indicates that the average socio-economic status of the Albany population is lower than for the State as a whole. Figure 2.40 shows that households and individuals in the City of Albany were more skewed towards the lower end of the weekly income distribution than was the case for the State in 2001. About 52 per cent of households in Albany had a weekly income of \$600 or more in 2001 compared to 62 per cent of households in Western Australia, while 22 per cent of individuals in Albany had a weekly income in this range compared to 31 per cent of individuals in Western Australia.

Figure 2.40
Income Distribution of Households and Individuals, City of Albany: 2001*



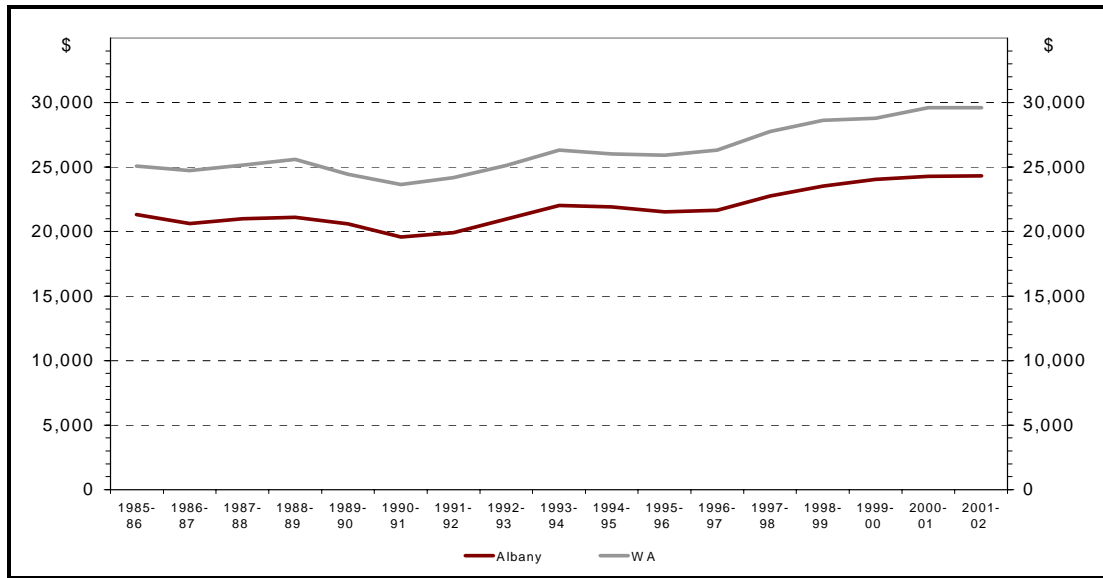
Note: * Proportions calculated excluding those who did not state their income and/or only stated partial income.

Source: ABS, 2001 Census Basic Community Profiles.

ATO data indicates that the mean taxable income of residents in the City of Albany has been consistently below that of the mean taxable income for Western Australia (by between \$3,500 and \$5,500) over the past 17 years (see Figure 2.41). Real mean taxable income in 2001-02 in Albany was \$3,000 higher than in 1985-86.

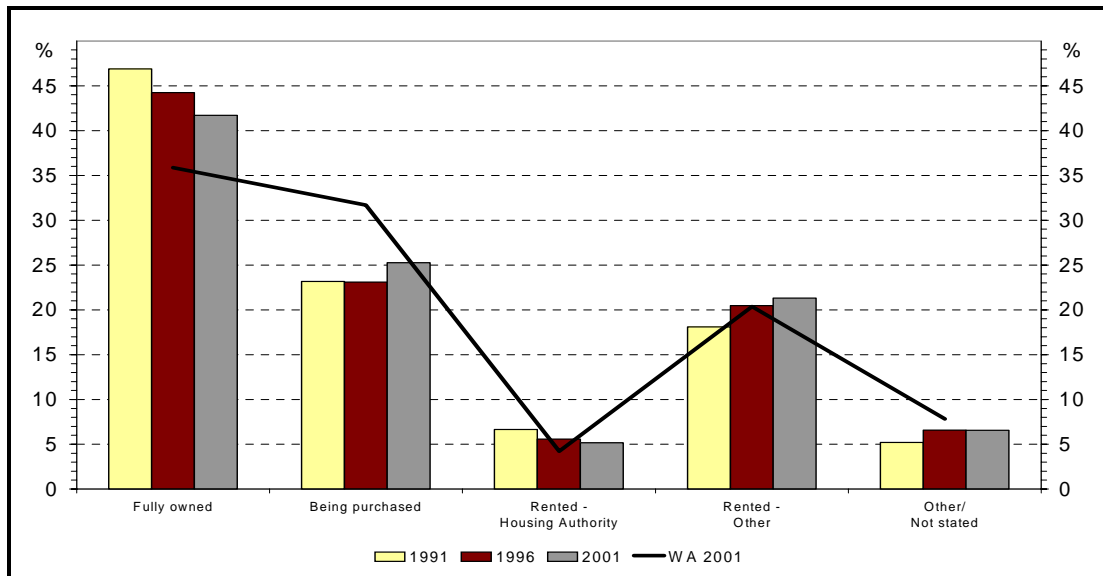
Census data on housing tenure indicates that proportionally more households in the City of Albany owned their own homes outright than across Western Australia as a whole in 2001 (42 per cent c.f. 36 per cent; see Table 2.42). This would at least partly reflect the relatively older age structure of the Albany population. A relatively lower proportion of Albany households were in the process of purchasing their residence in 2001 (25 per cent c.f. 32 per cent), while the proportion that was renting was similar to the average for the State overall.

Figure 2.41
Mean Taxable Income, City of Albany: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

Figure 2.42
Household Tenure Type, City of Albany: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.6.4 Recreation and Gaming

Given the demographics of the population of Albany, clubs in the area have been experiencing different levels of success. Sporting clubs, such as football, have been struggling for members in recent years while the bowling club is relatively strong. Many of the region’s clubs cater to the older members of the population with golf and yacht clubs providing activities for retired residents.

Gambling opportunities are limited. The TAB is popular in hotels and the region holds a racecourse with regular racing and trots events. However, betting on Perth races has become more common as telecasts of Perth racing events are held in local hotels in the region.

Average expenditure on lotteries is \$289 per adult or approximately 2.0 times the State average. Some 68 per cent of residents indicated that they purchased a weekly lotto ticket, some 15 to 17 percentage points below the three other Western Australian regions. Albany residents had the lowest rate of participation at the casino (6.1 per cent) and in wagering at the TAB (23.2 per cent) of the four major Western Australian regions in this study. The distance of Albany from the casino is an example of the distance decay effect where only a single or destination sites are available for gaming.

2.7 City of Warrnambool, Victoria

Warrnambool is Victoria's largest coastal city outside of Port Phillip Bay. It is located on the shores of Lady Bay some 263 kilometres south west of Melbourne, and only 188 kilometres from Geelong. Warrnambool's strategic location on the Great Ocean Road and coast has positioned the region as a comprehensive regional service centre and hub for transport and tourism activity in south west Victoria. This region is a significant tourism destination with major attractions such as Southern Right whales, shipwrecks and other coastline attractions.

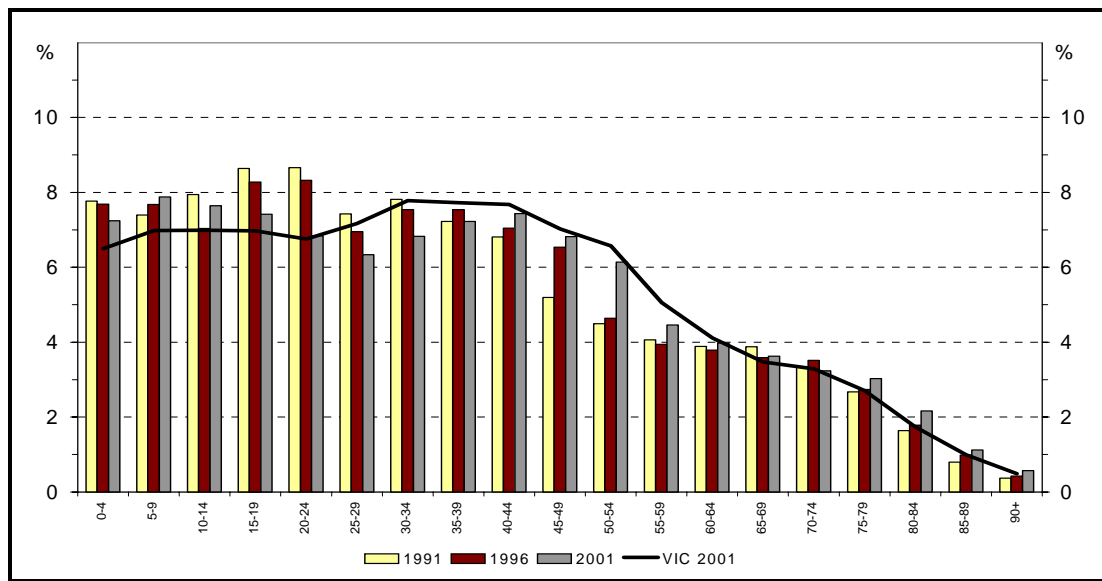
2.7.1 The People

The Census Usual Residents Profile indicates that the City of Warrnambool had a total population of 28,845 in 2001. About 73 per cent of the population were of adult age. More recent preliminary estimates from the ABS indicate that Warrnambool had an estimated total population of 30,354 at 30 June 2003. The population for the region is estimated to have increased by 1.1 per cent between 30 June 2002 and 2003, which is similar to the estimated rise of 1.2 per cent in the total population of Victoria over this period.

In terms of other characteristics of the Warrnambool population, a higher proportion of the City's population in 2001 was indigenous compared to the State overall (1.0 per cent c.f. to 0.5 per cent).

The age distribution of the Warrnambool population is broadly similar to the Victorian age distribution (see Figure 2.43). The main area of difference is that Warrnambool has a relatively higher share of persons aged less than 20 years (30 per cent c.f. 27 per cent), and a slightly lower share aged 25 to 39 years (20 per cent c.f. 23 per cent). This may reflect that younger adults have emigrated from the region to pursue career opportunities elsewhere. Warrnambool also has a relatively higher share of persons aged 65 years and over. This is reflected in data on aged pension recipients which indicates that an equivalent of 10.7 per cent of the estimated resident population in Warrnambool were receiving the age pension at June 2002 compared to 9.5 per cent of the total Victorian population.

Figure 2.43
Age Distribution, City of Warrnambool: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

An area of significant difference between the Warrnambool and Victorian populations is the proportion that are born in Australia. Census data presented in Table 2.10 shows that a significantly larger proportion of the Warrnambool population in 2001 compared to the Victorian population was born in Australia (88 per cent c.f. 71 per cent). Of those Warrnambool residents born overseas, the United Kingdom, New Zealand and the Netherlands were the most common countries of birth.

Table 2.10
Country of Birth, City of Warrnambool: 1991, 1996 & 2001
(Per cent)

	Warrnambool 1991	Warrnambool 1996	Warrnambool 2001	Vic 2001
Australia	91.9	89.9	88.0	70.6
United Kingdom	3.0	3.0	2.5	4.4
New Zealand	0.5	0.5	0.7	1.2
Netherlands	0.5	0.5	0.4	0.5
Germany	0.2	0.2	0.2	0.6
Ireland	0.2	0.2	0.1	0.2
United States of America	0.1	0.1	0.1	0.2
Philippines	0.1	0.1	0.1	0.5
Italy	0.1	0.1	0.1	1.9
Sri Lanka	0.1	0.1	0.1	0.6

Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

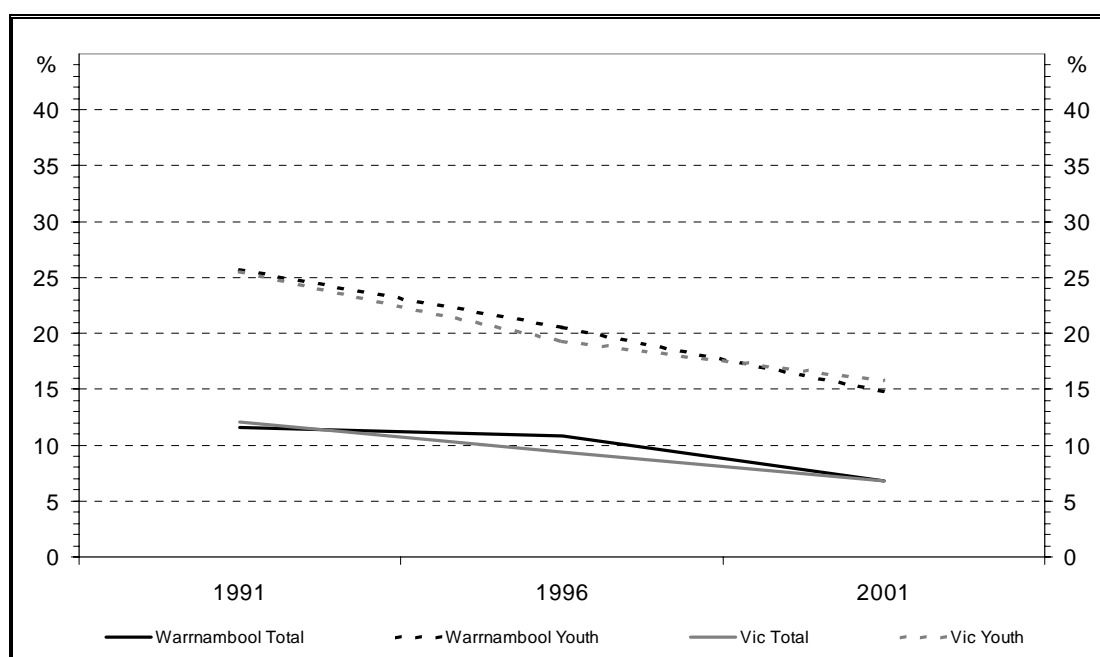
In terms of registered marital status, the proportion of the adult population of Warrnambool who were married in 2001 was almost equivalent to that for the State as a whole (51 per cent compared to 52 per cent).

Census data indicates that the average level of educational attainment was relatively lower for the City of Warrnambool population compared to the Victorian population in 2001 — 30 per cent of the Warrnambool population aged 15 years and over had completed Year 12 or an equivalent compared to 39 per cent of the State population.

2.7.2 The Local Economy

Unemployment rates in the City of Warrnambool have been closely aligned with the rates for Victoria over the past three Census periods (see Figure 2.44). In 2001, the rate of unemployment in Warrnambool was 6.8 per cent, which was identical to the State unemployment rate. More recent estimates of unemployment from the Department of Employment and Workplace Relations indicates that unemployment was higher in Warrnambool than for the State as a whole in the September quarter 2004 (7.4 per cent c.f. 5.7 per cent). However, some caution is urged when using the DEWR estimates of unemployment as a measure of the true level of unemployment as they can fluctuate significantly from one period to the next.

Figure 2.44
Unemployment Rate, City of Warrnambool: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

The rate of youth unemployment in the region has also been similar to the State as a whole over the last 3 Census years. 14.9 per cent of people aged 15 to 19 years were unemployed in Warrnambool in 2001 compared to 15.8 per cent for the State.

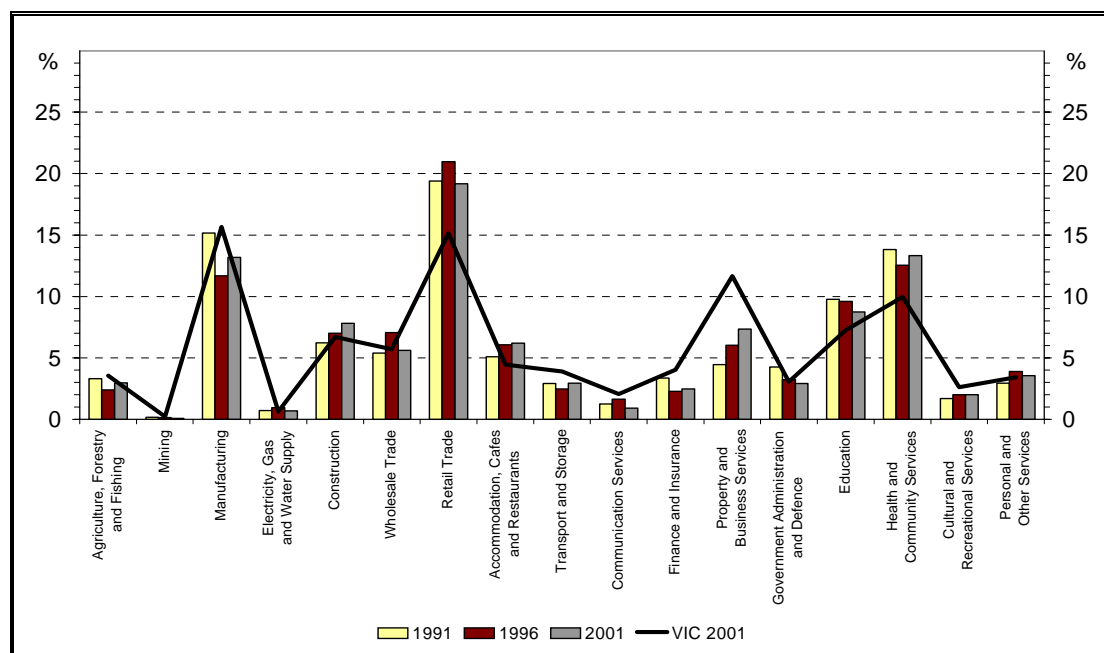
Warrnambool is the principal regional service centre in south west Victoria. The City has a growing population, which have been attracted by the City's appeal as a stable coastal city, with a rich maritime heritage and strong environmental themes. Being located on Victoria's rugged south west coast at the western end of the internationally significant Great Ocean Road, and with major attractions such as shipwrecks and Southern Right Whales, Warrnambool is a strategic destination for tourists. In addition

to tourism, major industries include retail trade, education and health, dairy and meat processing, clothing manufacture, and construction.

Warrnambool is at the heart of Australia's fastest growing dairy region. The region's farmers produce over 2 billion litres of milk each year, most of which is processed for export by major firms in the City and surrounding region, including Nestle, Murray Goulburn, Bonlac and the Warrnambool Cheese and Butter Factory. Beef production is also a significant industry in Warrnambool and Midfield Meats — one of the largest and most successful exporters of beef products in Victoria — is established locally.

Figure 2.45 shows a proportional breakdown of employed persons in Warrnambool by their industry of employment for the last three Census years, and for the State for 2001. The most significant industry sectors for Warrnambool in terms of employment in 2001 were retail trade (19 per cent of total employment), health and community services (13 per cent), manufacturing (13 per cent), and education (8.7 per cent). Compared to the State as a whole, Warrnambool had a significantly higher share of persons employed in retail trade and health and community services in 2001. The former reflects the impact of tourism on the structure of employment in the region, which also explains why Warrnambool had a slightly higher share of persons employed in accommodation, cafes and restaurants in 2001 (6.2 per cent c.f. 4.4 per cent).

Figure 2.45
Employment by Industry, City of Warrnambool: 1991, 1996 & 2001*



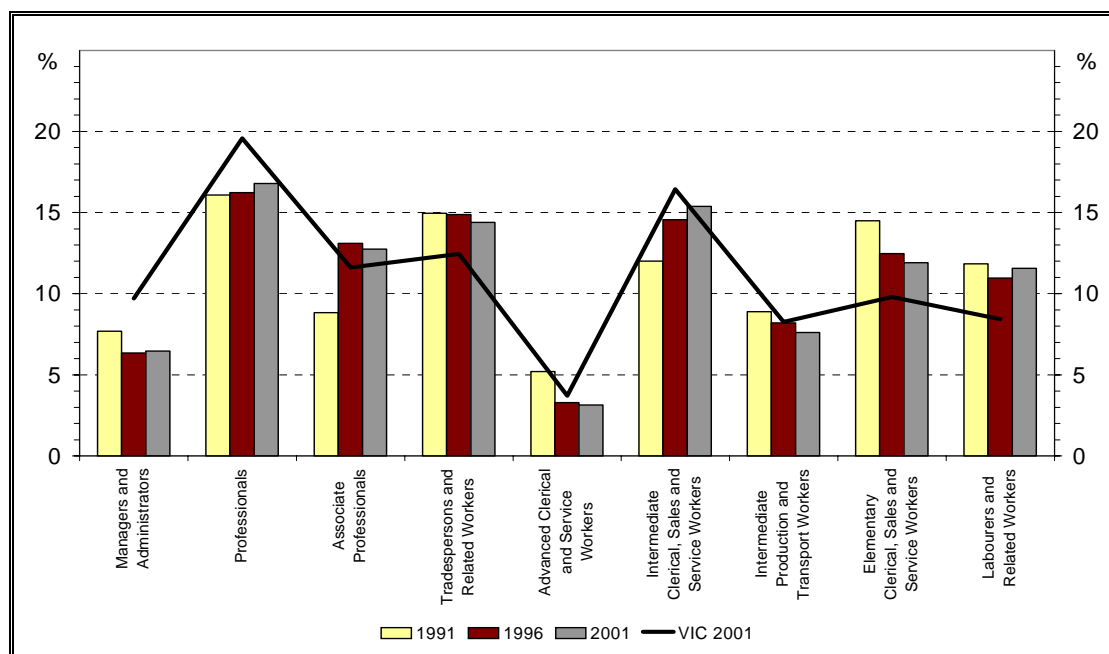
Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.

Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

The occupational profile of the Warrnambool workforce for the last three Census periods and for the State for 2001 is illustrated in Figure 2.46. In 2001, Warrnambool had an under-representation of managers and administrators and professionals compared to the State, while on the other hand it had a higher proportion of tradespersons and related workers, elementary clerical, sales and services workers, and labourers and related workers than the State overall. The relatively higher share of elementary clerical, sales

and service workers is explained by the importance of retail trade and hence tourism to the local economy, which is also probably a significant factor behind the greater prevalence of labourers and related workers.

Figure 2.46
Employment by Occupation, City of Warrnambool: 1991, 1996 & 2001*



Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

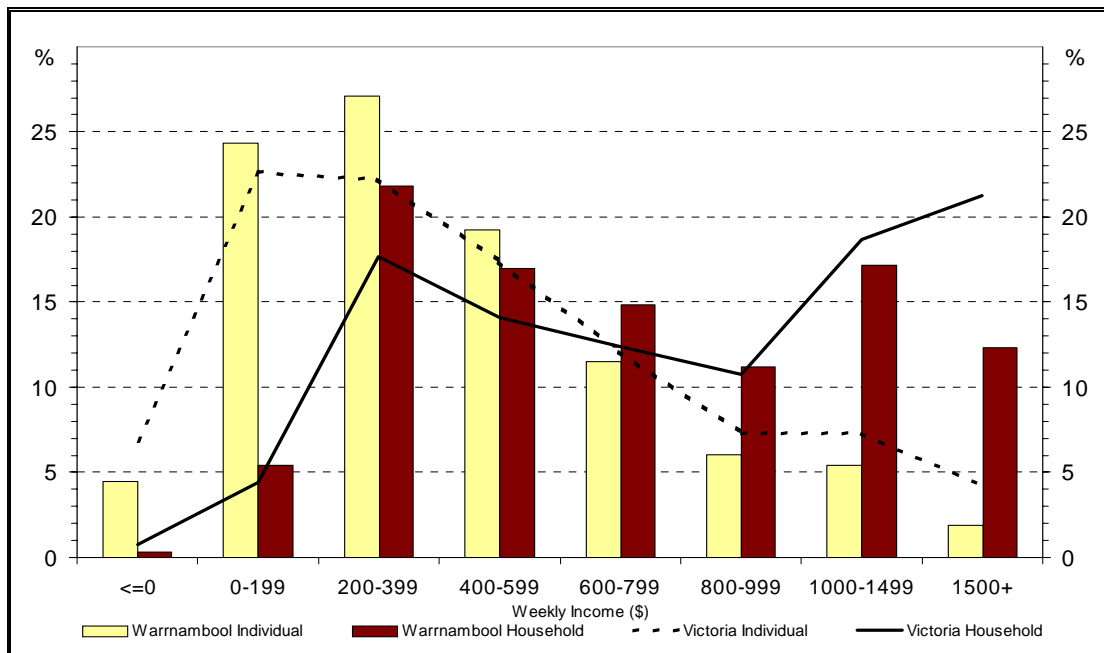
2.7.3 Income Distribution

The distribution of personal incomes for residents of the City of Warrnambool is skewed towards lower income ranges compared to the distribution for the State as a whole (see Figure 2.47). About 56 per cent of persons aged 15 years and over in the City earned less than \$400 per week in 2001 compared to 52 per cent of the respective State population. The pattern is similar for household weekly income, with 59 per cent of households in Warrnambool reporting a weekly income of less than \$800 compared to 49 per cent of Victorian households.

Figure 2.48 shows that the mean taxable income in Warrnambool has been consistently below the State average over the last 17 years to 2001-02. The gap was over \$4,000 in 2001-02.

The profile of household tenure type was broadly similar for the City of Warrnambool as for Victoria overall in 2001 (see Figure 2.49). Nevertheless, a higher proportion of households in Warrnambool indicated they were renting their home in 2001 (27 per cent c.f. 22 per cent). This difference reflected that a higher proportion of households in Victoria compared to the region either fully owned their own home (43 per cent c.f. 42 per cent) or were in the process of purchasing their own home (28 per cent c.f. 26 per cent).

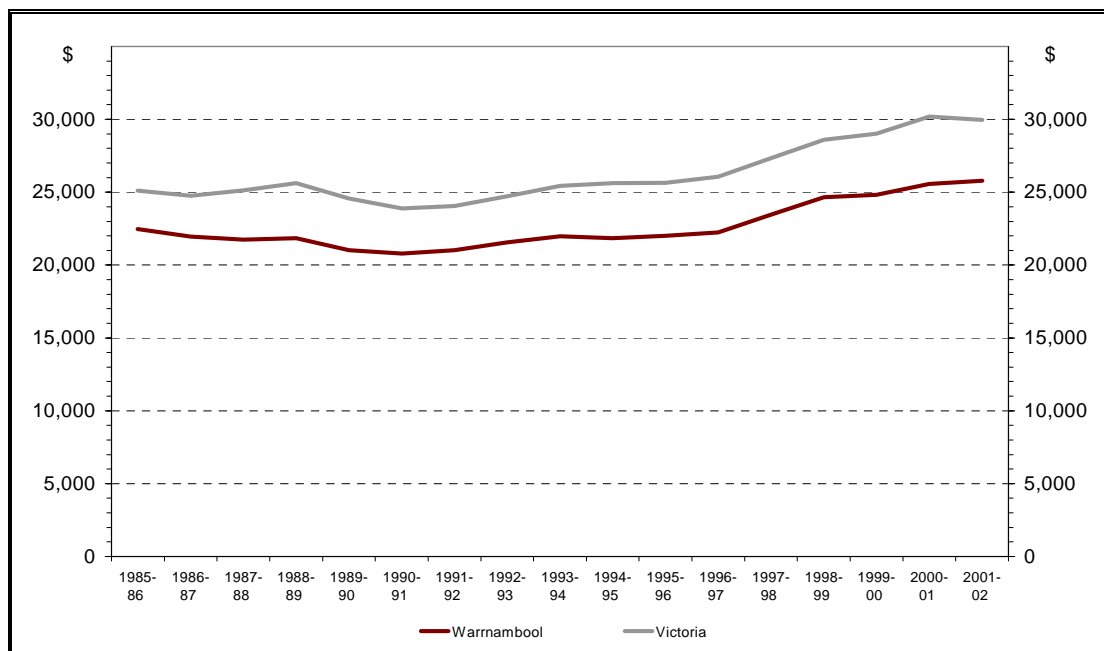
Figure 2.47
Income Distribution of Households and Individuals, City of Warrnambool: 2001*



Note: * Proportions calculated excluding those who did not state their income and/or only stated partial income.

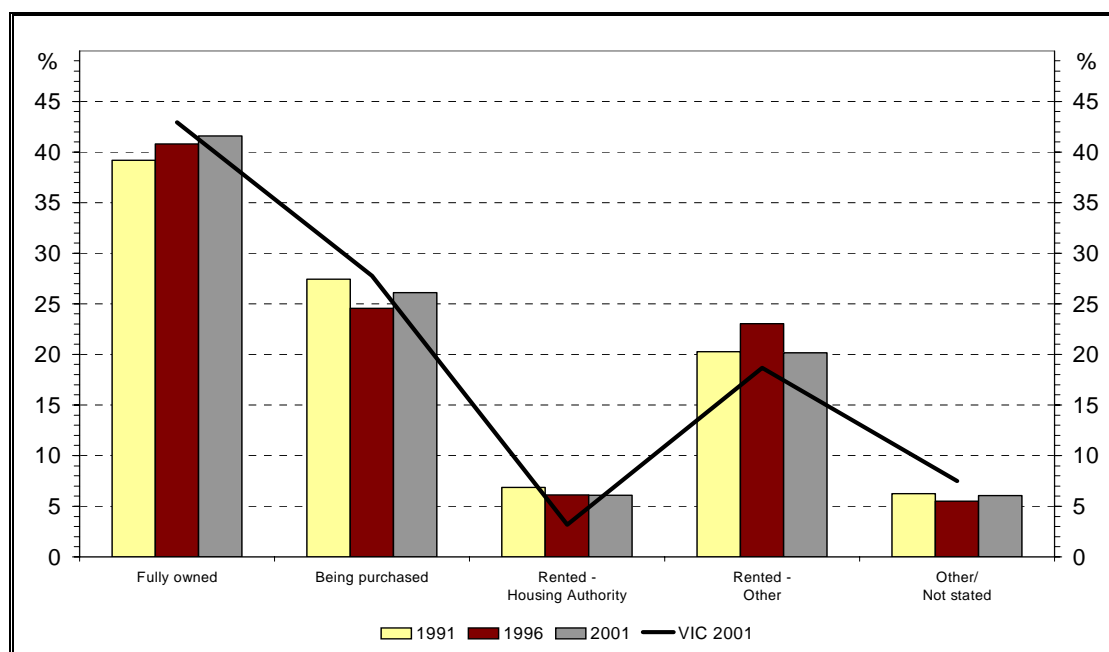
Source: ABS, 2001 Census Basic Community Profiles.

Figure 2.48
Mean Taxable Income, City of Warrnambool: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

Figure 2.49
Household Tenure Type, City of Warrnambool: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.7.4 Recreation and Gambling for City of Warrnambool

The characteristics of the gambling environment for the City of Warrnambool are summarised in Table 2.11.

Electronic gaming machines are quite prevalent in the City of Warrnambool. For instance, the City was ranked third in 2003-2004 among all Victorian local government areas in terms of the number of EGMs per 1,000 adults.

Table 2.11
Gambling Indicators for City of Warrnambool, 2003-04

Venues: 2004 ¹	16
EGMs: 2004	252
EGMs per 1,000 adults (2003-04)	11.6
Gaming Losses 2003/04, \$ million	\$16.2
Losses per Adult 2003-04	\$745
Cumulative Losses since 1992-93 (\$ millions: adjusted to 2004 dollars)	\$168
Cumulative Losses per Adult since 1992-93 (adjusted to 2004 dollars)	\$7,711

Note: ¹ Number of electronic gaming machines at 30 June 2004 in hotels and clubs.

Source: Victorian Local Government Association

Only 7.7 per cent of residents indicated they had attended the Crown Casino in the last year. Approximately two-thirds of residents purchased a weekly lottery ticket and one-third of residents wagered at the TAB or placed a bet on-course in the last year.

2.8 Cities of Geraldton and Greenough, Western Australia

Situated on the Batavia Coast 424 kilometres north of Perth, the regional City of Geraldton is a port city which acts as an administrative, commercial and service centre for the Mid West Region of Western Australia. Geraldton is surrounded by the Shire of Greenough which is a semi-rural region that has significant farming activities.

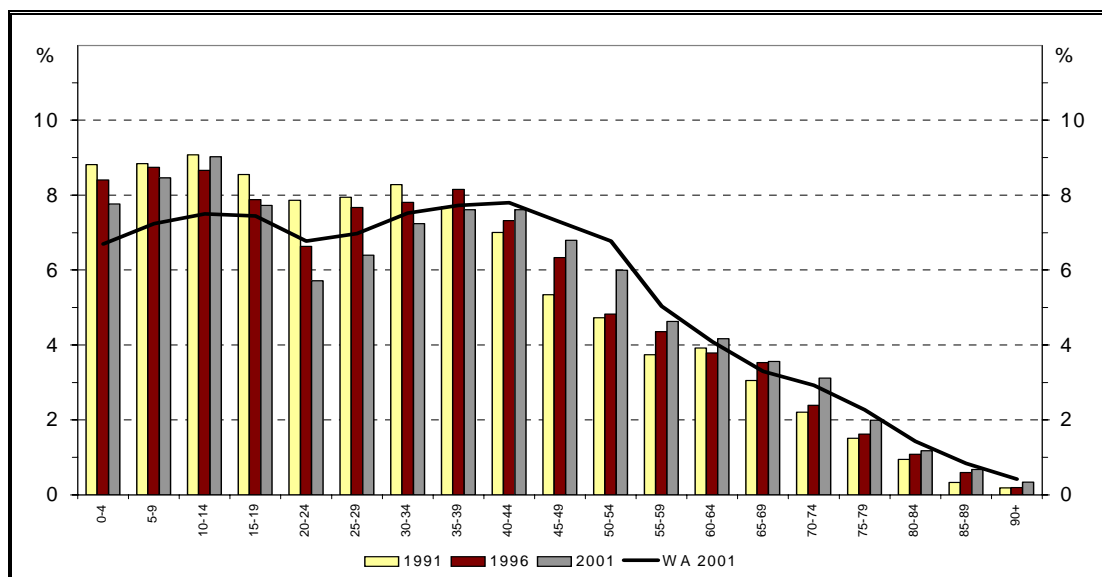
2.8.1 The People

The Census Usual Residents Profile indicates that the City of Geraldton and Greenough had a total population of 31,131 in 2001, of which 70 per cent were adults. About 61 per cent of the population was based in Geraldton. More recent estimates from the ABS indicate that the Geraldton-Greenough region had a total population of 32,492 at 30 June 2003. The total population of the region is estimated to have fallen by 0.5 per cent between 2003 and 2003, whereas the total Western Australian population is estimated to have grown by 1.4 per cent over this period.

An interesting feature of the Geraldton-Greenough population is that it had a relatively higher proportion of indigenous persons compared to the State as a whole in 2001 (7.9 per cent c.f. 3.2 per cent).

Figure 2.50 illustrates the age distribution of the Geraldton-Greenough population for the last 3 Census years and the Western Australian population for 2001. The age distribution of the two populations is broadly similar for middle to older age groups while there are some differences for younger age groups. The Geraldton-Greenough region had a higher share of persons aged less than 20 years compared to the State (33 per cent c.f. 29 per cent), while it had a relatively lower share of persons aged 20 to 34 years (19 per cent to 21 per cent). This is consistent with other regional areas where young adults appear to have migrated to metropolitan areas in greater numbers mainly in the search of greater career opportunities including further education opportunities.

Figure 2.50
Age Distribution, Cities of Geraldton and Greenough: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

In terms of other population characteristics, the Geraldton-Greenough region also has a far lower proportion of migrants relative to the State. Almost 83 per cent of the regions population in 2001 was born in Australia compared to 67 per cent of the State population (see Table 2.12). This is also characteristic of regional areas where relatively more limited job opportunities lead to reduced levels of migration. The United Kingdom, New Zealand and Italy were the three main countries of origin for those living in the region who were born overseas.

Table 2.12
Country of Birth, Cities of Geraldton and Greenough: 1991, 1996 & 2001
(Per cent)

	Geraldton-Greenough 1991	Geraldton-Greenough 1996	Geraldton-Greenough 2001	Western Australia 2001
Australia	83.1	82.7	82.6	67.1
United Kingdom	6.6	6.2	5.6	10.9
New Zealand	1.3	1.4	1.6	2.4
Italy	0.9	0.8	0.7	1.2
Netherlands	0.4	0.4	0.4	0.6
South Africa	0.3	0.2	0.3	0.8
Philippines	0.2	0.2	0.3	0.3
Germany	0.3	0.3	0.3	0.5
Ireland	0.4	0.3	0.2	0.5
United States of America	0.2	0.3	0.2	0.3

Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Census data indicates that the registered marital profile of the Geraldton-Greenough population is very similar to that of the State population. About 51 per cent of persons aged 15 years and over in both the region and State were married in 2001.

Educational attainment levels for the Geraldton-Greenough population are significantly lower than for the State average. Only 27 per cent of the population aged 15 years and over in the region had completed Year 12 in 2001 compared to 38 per cent of the State population.

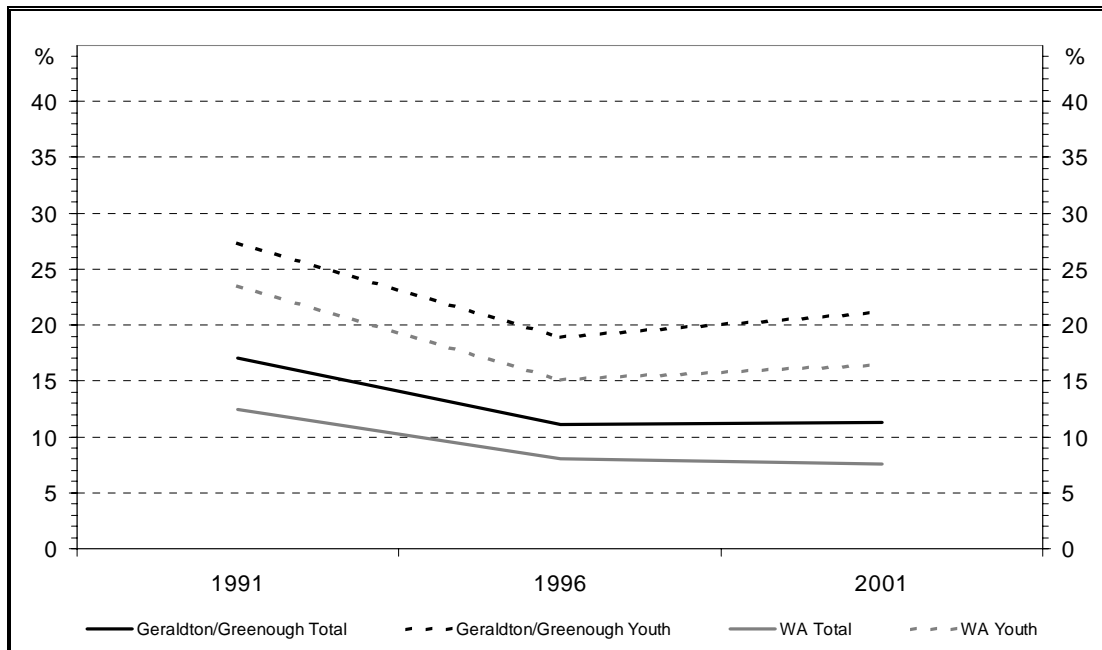
2.8.2 The Local Economy

Census data indicates that unemployment in the Geraldton-Greenough region has been high relative to the State over the last three Census years (see Figure 2.51). In 2001, 11.3 per cent of the labour force was unemployed compared to 7.5 per cent of the Western Australian labour force. More recent estimates of unemployment from the DEWR Small Area Labour Markets series indicates that the Geraldton-Greenough region had an unemployment rate of 7.2 per cent compared to a State average of 5.4 per cent in the September quarter 2004. Hence, it appears that unemployment in the region has fallen significantly since the last Census but it remains above average.

In terms of youth unemployment, unemployment among 15 to 19 year olds in Geraldton-Greenough has also been considerably higher than the State average over the last three Census years. In 2001, 21.1 per cent of the youth labour force in the region was out of work compared to 16.4 per cent for the State.

The City of Geraldton acts as an administrative and service centre for the Mid West region. Agriculture, mining, fishing, and tourism are significant activities in the Mid West region. The City of Greenough, which surrounds Geraldton, increasingly caters for the extended suburbs of Geraldton, and has a significant agricultural sector, in particular wheat and sheep.

Figure 2.51
Unemployment Rate, Cities of Geraldton and Greenough: 1991, 1996 & 2001

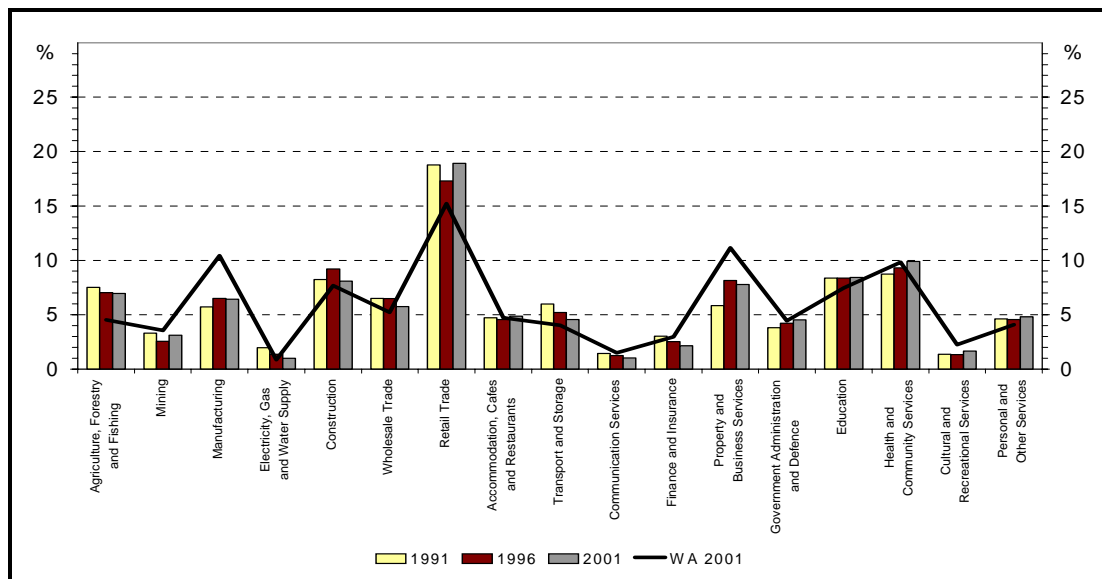


Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

The pattern of employment by industry for Geraldton-Greenough for the last three Census years and for Western Australia for 2001 are illustrated by Figure 2.52. Retail trade was the largest employing industry in the region in 2001, accounting for about 19 per cent of total employment. This was relatively higher than the share of persons employed in retail trade at the State level (15 per cent). The region also had a relatively greater share of persons employed in agriculture compared to the State (7.0 per cent c.f. 4.5 per cent). Other significant employing industry sectors in the region in 2001 were health and community services (9.9 per cent), education (8.4 per cent), and construction (8.1 per cent). Sectors in which the region had a relatively lower share of persons employed compared to the State were manufacturing (6.4 per cent c.f. 10.4 per cent), and property and business services (7.8 per cent c.f. 11.2 per cent).

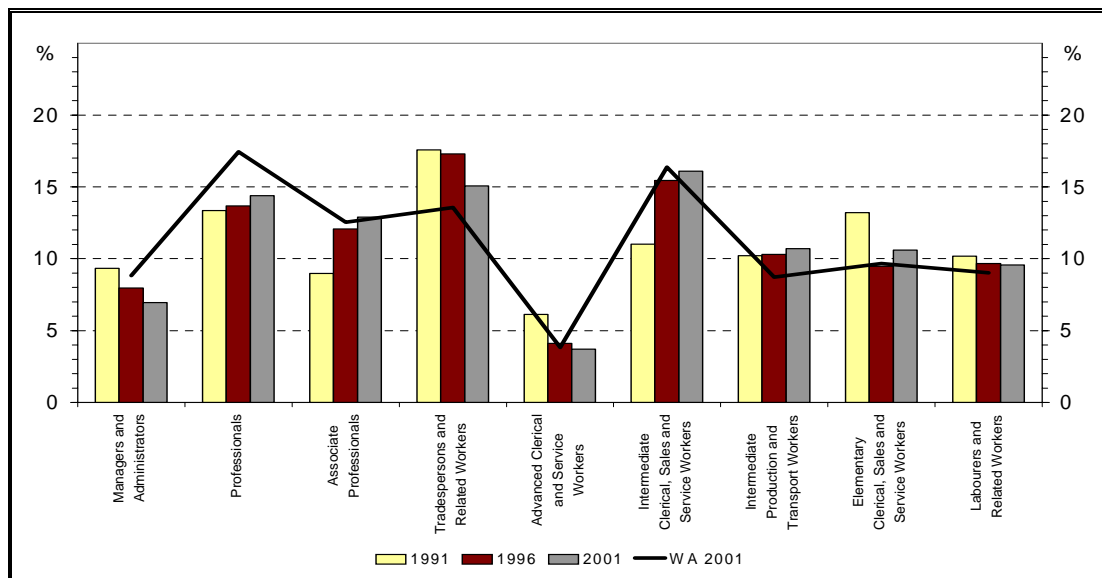
The occupational profile of employment for the Geraldton-Greenough region and Western Australia is presented in Figure 2.53. In 2001, compared to the State, the region had a relatively larger share of persons employed as intermediate production and transport workers (11 per cent c.f. 8.7 per cent), and tradespersons and related workers (15 per cent c.f. 14 per cent). On the other hand, the region had a relatively smaller share of persons employed and professionals (14 per cent c.f. 17 per cent), and managers and administrators (7.0 per cent c.f. 8.8 per cent).

Figure 2.52
Employment by Industry, Cities of Geraldton and Greenough: 1991, 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

Figure 2.53
Employment by Occupation, Cities of Geraldton and Greenough: 1991, 1996 & 2001*

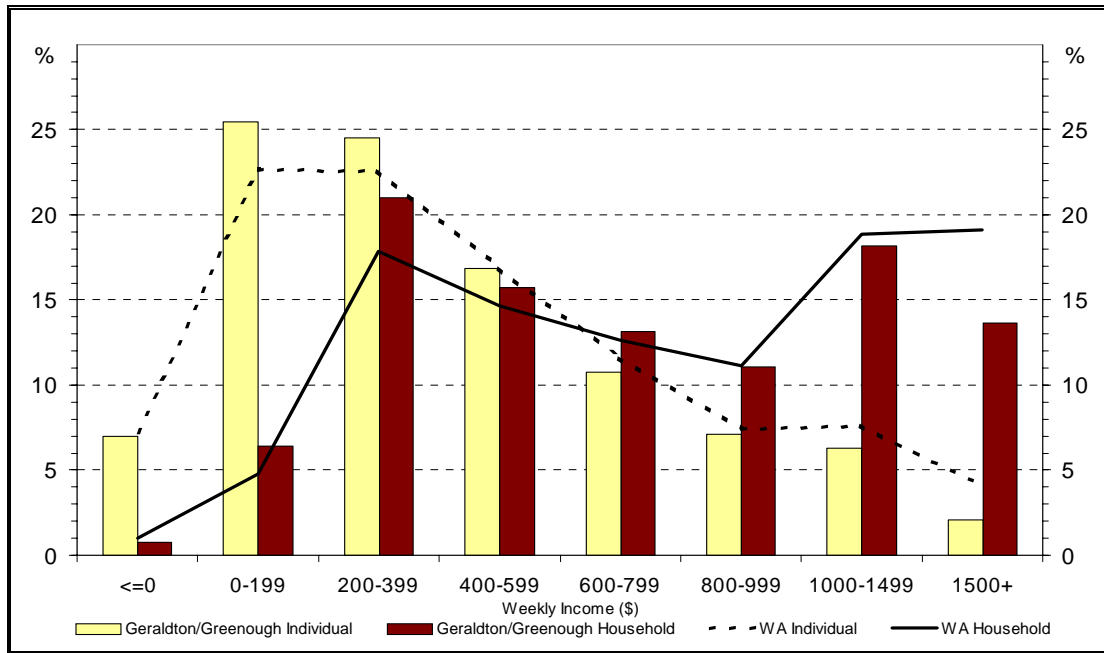


Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.8.3 Income Distribution

Census data indicates that the Geraldton-Greenough population is relatively less economically affluent compared to the State population (see Figure 2.54). About 74 per cent of individuals in the region earned less than \$600 per week in 2001, while 69 per cent of the respective State population earned such an amount. The pattern for household income is similar with 44 per cent of households in the region earning less than \$600 per week compared to an average of 38 per cent of households for the State.

Figure 2.54
Income Distribution of Households and Individuals,
Cities of Geraldton and Greenough: 2001*

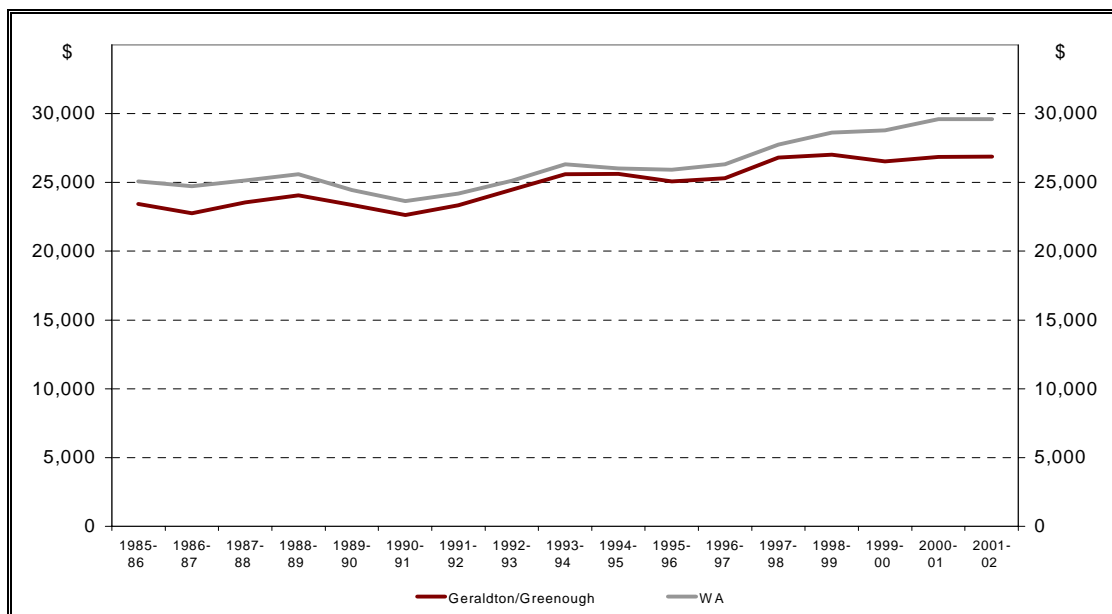


Note: * Proportions have been calculated excluding those who did not state their income and/or only stated partial income.

Source: ABS, 2001 Census Basic Community Profiles.

Data from the ATO indicates that the mean taxable income in the Geraldton-Greenough region has remained slightly below but generally moved in line with the average taxable income for the State over the 17 years to 2001-02 (see Figure 2.55). However, since 1997-98 the gap has widened so that, in 2001-02, the mean taxable income in Geraldton-Greenough was about \$2,500 lower than the State average.

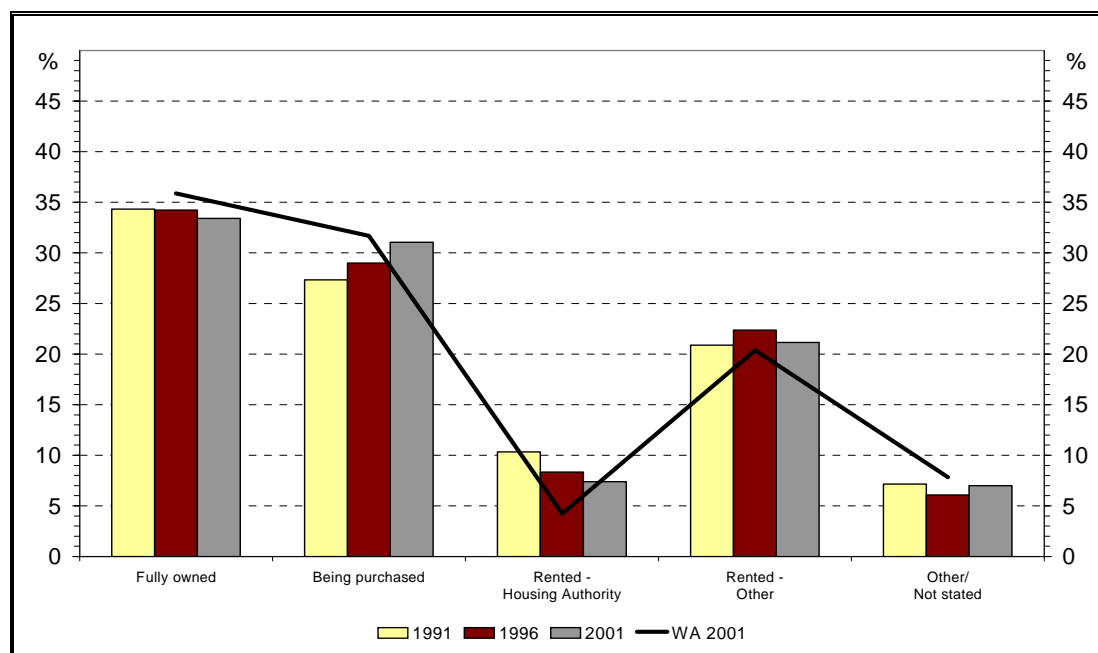
Figure 2.55
Mean Taxable Income, Cites of Geraldton and Greenough: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

The profile of household tenure type for the Geraldton-Greenough region is similar to the State profile (see Figure 2.56). A slightly higher proportion of Geraldton-Greenough dwellings were being rented compared to the State overall in 2001 (29 per cent c.f. 25 per cent), while a slightly lower proportion of dwellings were fully owned or were in the process of being purchased (64 per cent c.f. 68 per cent).

Figure 2.56
Household Tenure Type, Cities of Geraldton and Greenough: 1991, 1996 & 2001



Source: ABS, 2001 Census Basic Community Profiles, Time Series Profile.

2.8.4 Recreation and Gaming

With the rapid population growth of the region, the demand for sporting and recreation facilities is increasing. Sporting activities – hockey, swimming, golf, basketball, football and tennis – are popular. Other activities include yachting clubs and a theatre group. A sports academy in the region caters principally for young Aboriginal residents.

As for the State as a whole, lotto, TAB and local horse races are popular forms of gambling and entertainment, while local hotels are popular. Average expenditure per adult on lottery tickets was \$414 or 2.9 times the State average. Some 86 per cent of respondents indicated they purchased lottery tickets, approximately one-third had wagered at the TAB, and ten per cent of respondents had visited the Burswood Casino in the last year.

2.9 Postcode Group 1: Bairnsdale (3875) and Busselton (6280)

2.9.1 Bairnsdale, Victoria (Postal Area 3875)

Bairnsdale is a small regional city located on the banks of the Mitchell River about 285 kilometres east of Melbourne in the East Gippsland Shire. Agriculture is an important local industry with vegetable growing and sheep, cattle and dairy farming in the surrounding districts being significant regional activities. Retail trade, tourism,

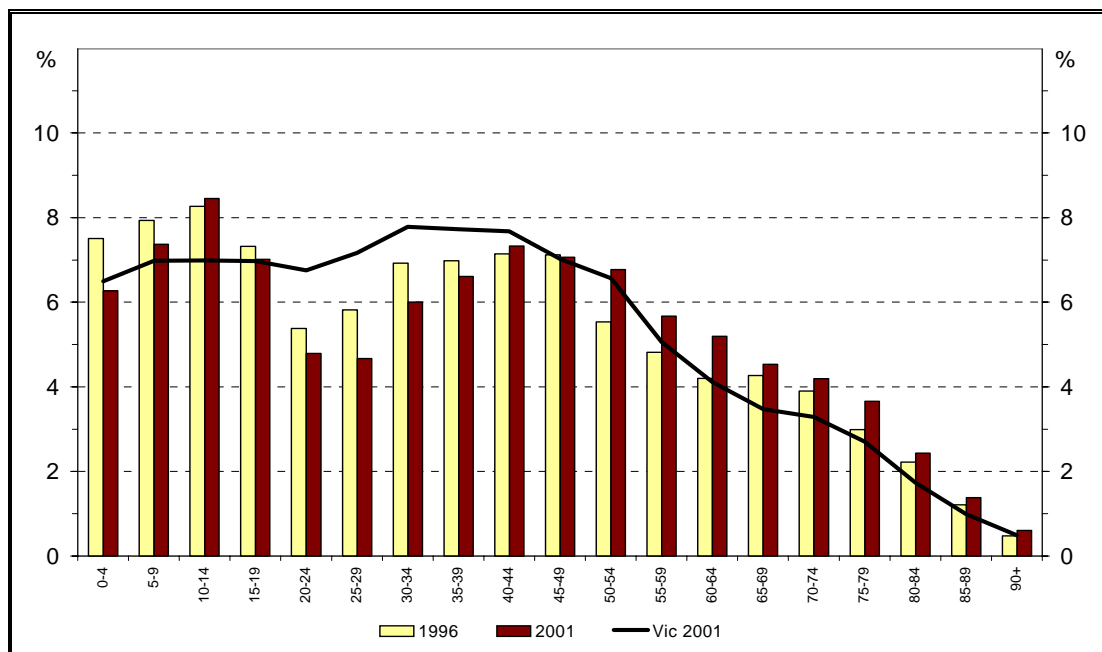
hospitality and other services and other significant local economic activities. Timber is also an important industry in the area.

For the purpose of this study, Bairnsdale refers to the area and population covered by post code 3875.

2.9.2 The People

Census data indicates that the City of Bairnsdale had a usual resident total population of 15,115 in 2001. The adult population was 11,627, which is equivalent to about 77 per cent of the total population.

Figure 2.57
Age Distribution, Bairnsdale: 1996 & 2001



Source: ABS, 1996 and 2001 Census Basic Community Profiles.

The age distribution of the Bairnsdale population is heavily weighted towards older age groups in comparison with the State population distribution (see Figure 2.57). For instance, about 34 per cent of the Bairnsdale population in 2001 was aged 50 years and over compared to about 28 per cent of the State population. A significantly lower share of the Bairnsdale population relative to the State population was aged 20 to 39 years in 2001 (22 per cent c.f. 29 per cent). This suggests that a relatively large number of young adults leave the region to pursue job and further education opportunities elsewhere.

Like most country areas, a relatively high proportion of the Bairnsdale population was born in Australia (84 per cent compared to 71 per cent of the Victoria population). The United Kingdom was the most common source of migrants, followed by Italy, Germany, New Zealand and the Netherlands (see Table 2.13).

Table 2.13
Country of Birth, Bairnsdale: 1996 & 2001
(Per cent)

	Bairnsdale 1996	Bairnsdale 2001	Victoria 2001
Australia	88.4	83.8	70.6
United Kingdom	3.1	3.4	4.4
Italy	0.8	0.8	1.9
Germany	0.5	0.5	0.6
New Zealand	0.5	0.5	1.2
Netherlands	0.5	0.5	0.5
Philippines	0.2	0.2	0.5
United States of America	0.2	0.1	0.2
Sri Lanka	0.1	0.1	0.6
Hong Kong (SAR of China)	0.1	0.1	0.3

Source: ABS, 1996 and 2001 Census Basic Community Profiles.

A relatively larger share of the Bairnsdale population compared to the State population in 2001 was of Aboriginal and/or Torres Strait Islander descent (2.6 per cent c.f. 0.5 per cent).

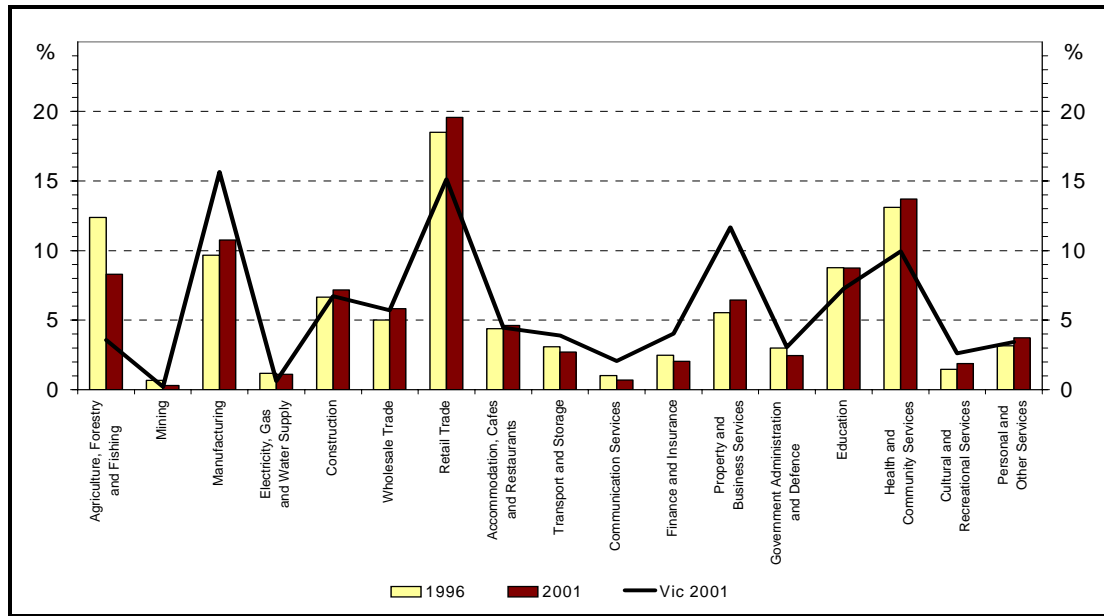
The registered marital status of the Bairnsdale population is similar to that of the State population. 53 per cent of the Bairnsdale population aged 15 years and over was married in 2001 compared to 52 per cent of the State population. Reflecting the older age structure of the Bairnsdale population, a relatively lower proportion of the population had never married (27 per cent compared to 32 per cent for Victoria).

2.9.3 The Local Economy

Unemployment in Bairnsdale was higher relative to the State as a whole in 2001. The overall unemployment rate in the region was 8.7 per cent compared to 6.8 per cent for Victoria, while then rate of youth unemployment for the region was 18.3 per cent compared to 15.8 per cent for the State.

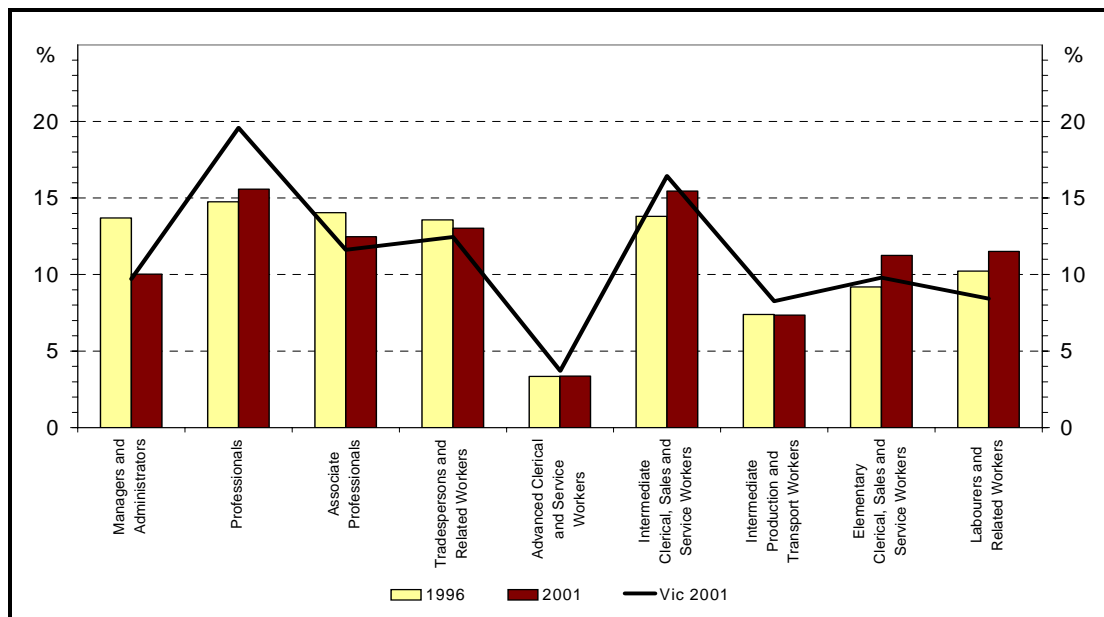
Figure 2.58 shows the profile of employed persons by their industry of employment for Bairnsdale and Victoria. In 2001, retail trade was the largest employing industry in Bairnsdale, accounting for almost 20 per cent of total employment in the region. Other significant employing industry sectors for the region were health and community services (14 per cent), manufacturing (11 per cent), education (8.7 per cent) and agriculture (8.3 per cent). Compared to the State, Bairnsdale had a relatively larger share of persons employed in agriculture, retail trade and health and community services in 2001, while it had a relatively smaller share employed in property and business services, and manufacturing.

Figure 2.58
Employment by Industry, Bairnsdale: 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

Figure 2.59
Employment by Occupation, Bairnsdale: 1996 & 2001*



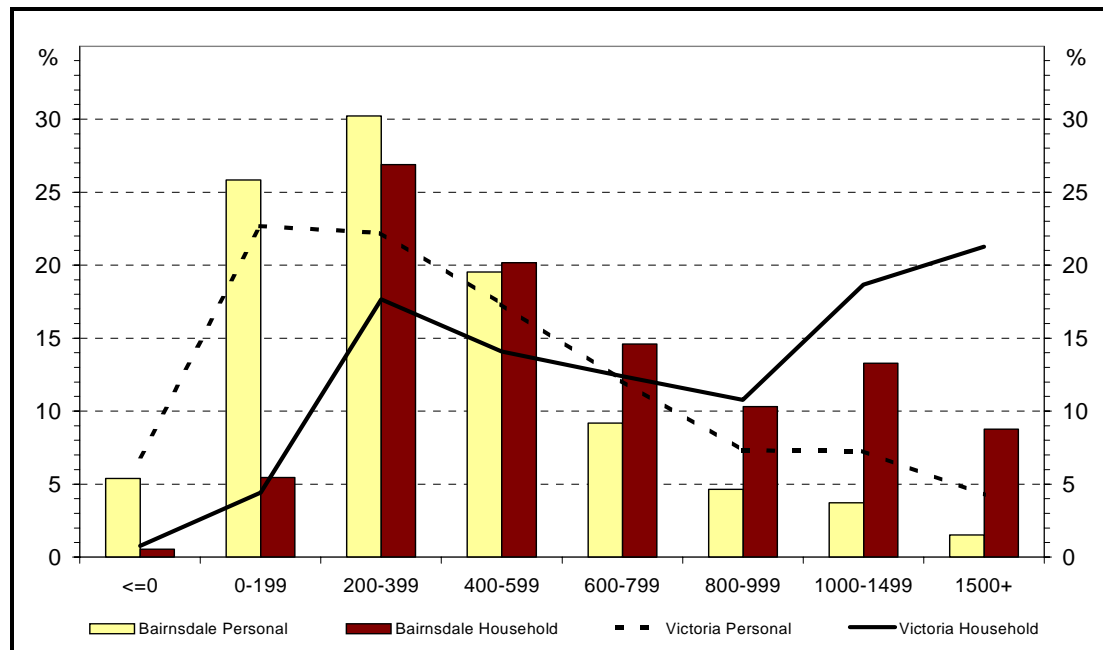
Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

The occupational profile of the Bairnsdale workforce in 2001 was broadly similar to that of the Victorian workforce (see Figure 2.59). However, Bairnsdale did have a relatively smaller share of persons employed as professionals compared to the State (16 per cent c.f. 20 per cent). Bairnsdale also had a slightly larger share of persons employed in relatively lower skilled occupations such as labourers and related workers (12 per cent c.f. 8.4 per cent), and to a lesser degree as elementary clerical, sales and service workers (11 per cent c.f. 9.8 per cent).

2.9.4 Income Distribution

In 2001, the income distribution for Bairnsdale residents was heavily weighted towards lower income ranges (see Figure 2.60). About 81 per cent of persons aged 15 years and over in the region earned less than \$600 per week compared to 69 per cent of the respective population in Victoria. Furthermore, 53 per cent of households in the region had an income of less than \$600 per week compared to 37 per cent of all households in Victoria.

Figure 2.60
Income Distribution of Households and Individuals, Bairnsdale: 2001*

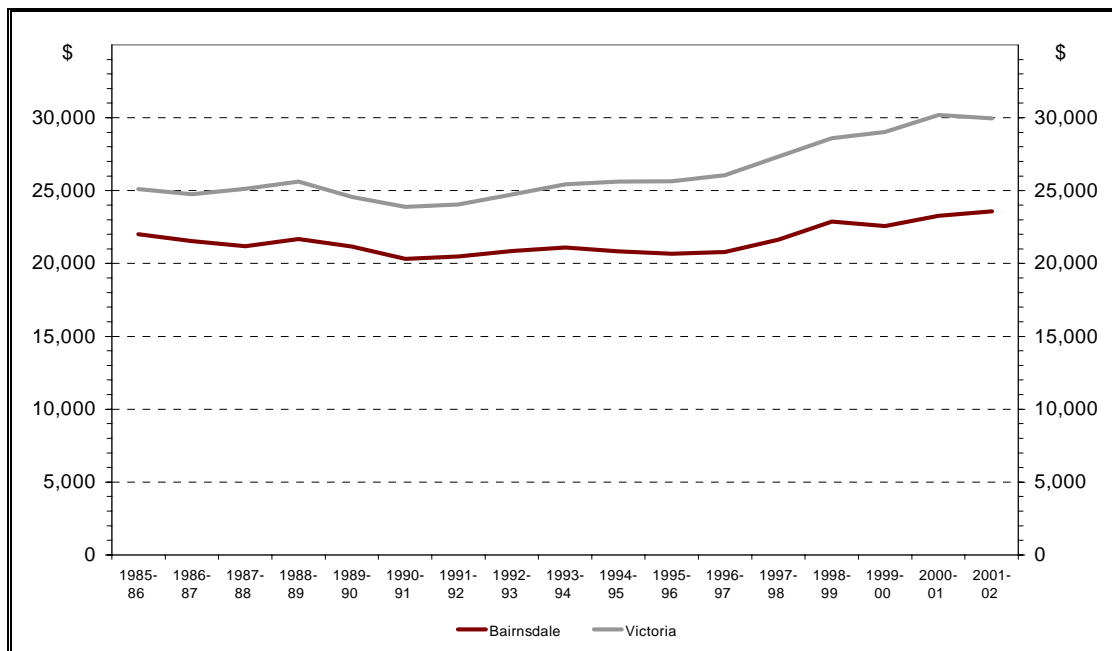


Note: * Proportions have been calculated excluding those who did not state their income and/or only stated partial income.

Source: ABS, 2001 Census Basic Community Profiles.

Consistent with the Census data, data from the Australian Taxation Office indicates that the mean taxable income for the Bairnsdale area has been significantly lower than the State mean over the 17 years to 2001-02 (see Figure 2.61). This gap has widened over time. Between 1985-86 and 2001-02, mean taxable income for Victoria rose by about 19 per cent while the mean for Bairnsdale rose by only 7 per cent. In 2001-02, the mean taxable income in Bairnsdale was about \$6,300 lower compared to the mean taxable income for the State as a whole.

Figure 2.61
Mean Taxable Income, Bairnsdale: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

2.9.5 Recreation and Gambling for Post Code Area: Bairnsdale

The characteristics of the gambling environment for the Bairnsdale area is as follows:

- there are 6 venues operating in Bairnsdale;
- the number of machines increased from 177 in the December quarter of 1999 to 185 in the June quarter of 2004, while the number of machines in East Gippsland Shire fell by 9 within the same period; and
- net gaming revenue per machine increased from \$4,800 in the December quarter of 1999 to \$5,297 in June quarter of 2004, which is above the average for the East Gippsland Shire of \$4,947 for the same period.

2.9.6 Busselton, Western Australia (Postal Area 6280)

The town of Busselton is located about 220 kilometres south of Perth. It is a popular holiday destination with attractions such as the Busselton Jetty, popular surfing locations, wineries and caves. Agricultural activities, such as viticulture, dairy and beef cattle farming, are important sources of economic activity for the region.

For the purposes of this study Busselton has been defined as the area covering the post code 6280. This post code accounts for about 89 per cent of the Busselton local government area in terms of geographical area, and about 81 per cent of the total population in the Busselton LGA.

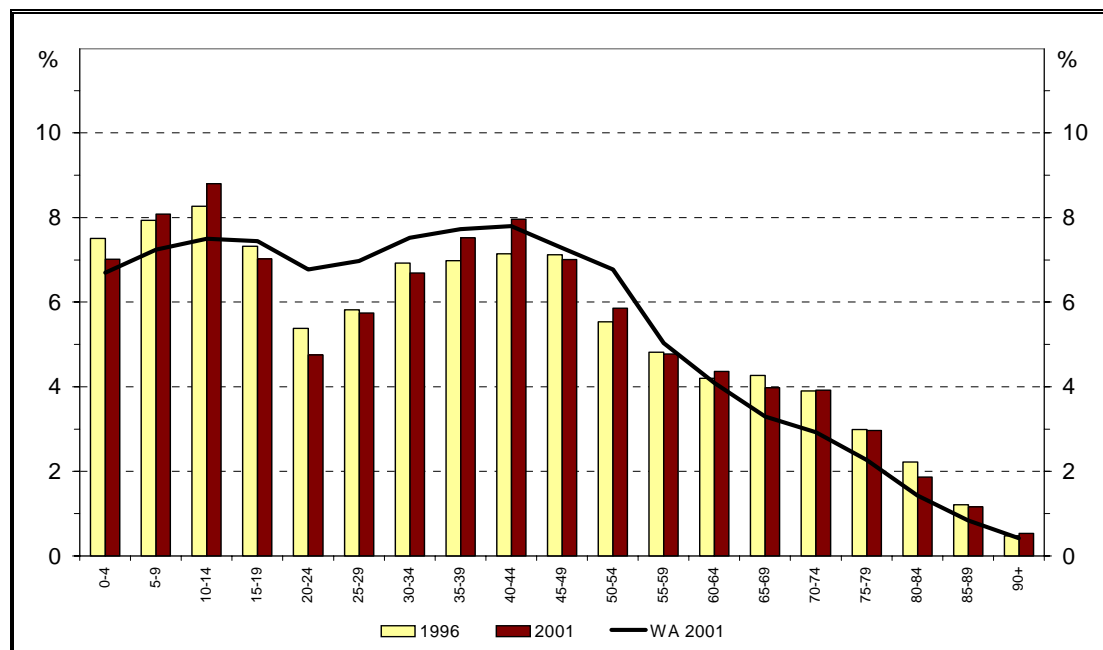
2.9.7 The People

According to the 2001 Census, Busselton had a usual resident population of 17,706 persons, of which 72 per cent were adults. The age distribution of the Busselton population is like that of most regional areas whereby the population is more heavily weighted to older age groups (see Figure 2.62). For instance, about 23 per cent of the Busselton population was aged 55 years and over in 2001 compared to 20 per cent of the Western Australian population. A relatively lower share of the Busselton population was aged 20 to 39 years compared to the State population (25 per cent c.f. 29 per cent) while a relatively larger share of the population was aged less than 20 years (31 per cent c.f. 29 per cent).

A high proportion of the Busselton population was born in Australia compared to the State as a whole in 2001 (80 per cent c.f. 67 per cent; see Table 2.14). Of those born overseas, the United Kingdom and to a lesser degree New Zealand were the main source of migrants. This is a common feature of regional areas with migrants tending to settle in metropolitan areas near capital cities where employment opportunities and community support services are greater.

A relatively lower share of the Busselton population in 2001 was of Aboriginal and/or Torres Strait descent; 1.7 per cent of the Busselton population were indigenous compared to 3.2 per cent of the State population.

Figure 2.62
Age Distribution, Busselton: 1996 & 2001



Source: ABS, 1996 and 2001 Census Basic Community Profiles.

Table 2.14
Country of Birth, Busselton: 1996 & 2001
(Per cent)

	Busselton 1996	Busselton 2001	WA 2001
Australia	88.4	80.0	67.1
United Kingdom	3.1	7.9	10.9
New Zealand	0.5	1.5	2.4
South Africa	0.1	0.5	0.8
Germany	0.5	0.4	0.5
Netherlands	0.5	0.4	0.6
Italy	0.8	0.3	1.2
United States of America	0.2	0.3	0.3
Ireland	0.1	0.3	0.5
India	0.1	0.2	0.7

Source: ABS, 1996 and 2001 Census Basic Community Profiles.

Reflecting the older age structure of the Busselton population, a larger proportion of the population aged 15 years and over indicated in the 2001 Census that they were married, compared to the respective State population (55 per cent c.f. 51 per cent). A relatively lower proportion of the Busselton population than the State population indicated they had never married (27 per cent c.f. 33 per cent).

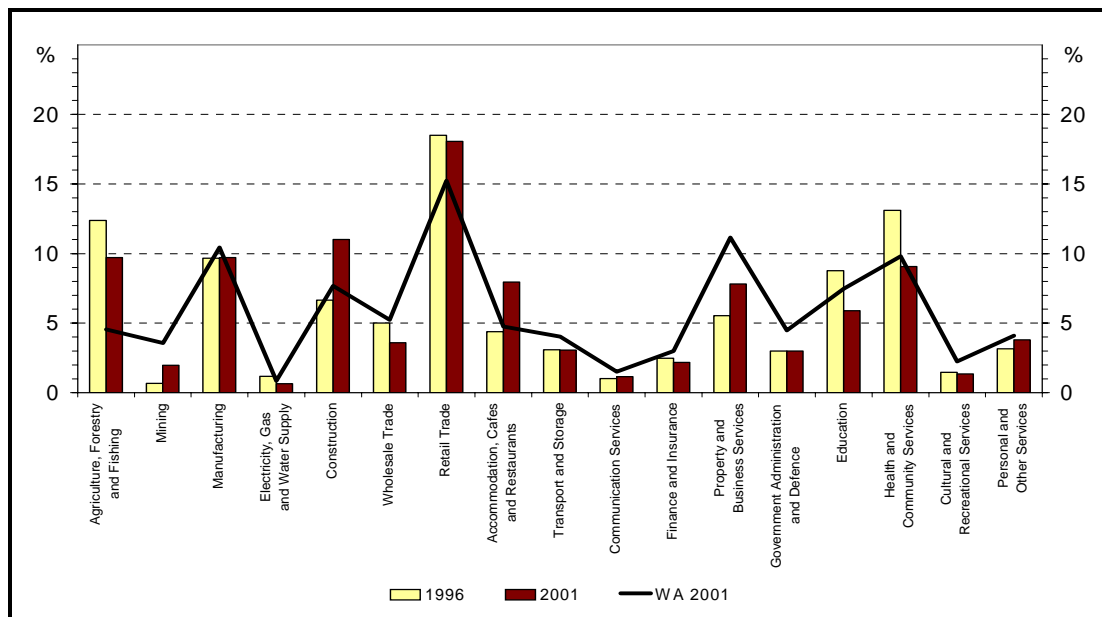
2.9.8 The Local Economy

The overall level of unemployment in the Busselton region was similar to that for the State as a whole in 2001. The overall unemployment rate in the area was 7.1 per cent compared to 7.5 per cent for the State. The rate of youth unemployment was also lower in Busselton than in Western Australia as a whole in 2001 (13.6 per cent c.f. 16.4 per cent).

Figure 2.63 shows the pattern of employment by industry for Busselton and Western Australia. In 2001, retail trade was the largest employing industry in Busselton, accounting for 18 per cent of the region's total workforce. Other major employing industries were construction (11 per cent), manufacturing and agriculture, forestry and fishing (9.7 per cent respectively), and health and community services (9.1 per cent). Compared to the State, Busselton had a relatively larger share of persons employed in agriculture, construction, retail trade and accommodation, cafes and restaurants in 2001. The relatively greater share of employment in the latter two industries probably reflects the importance of tourism to the region. Busselton had a relatively lower share of persons employed in mining, property and business services, and government administration and defence at the last Census.

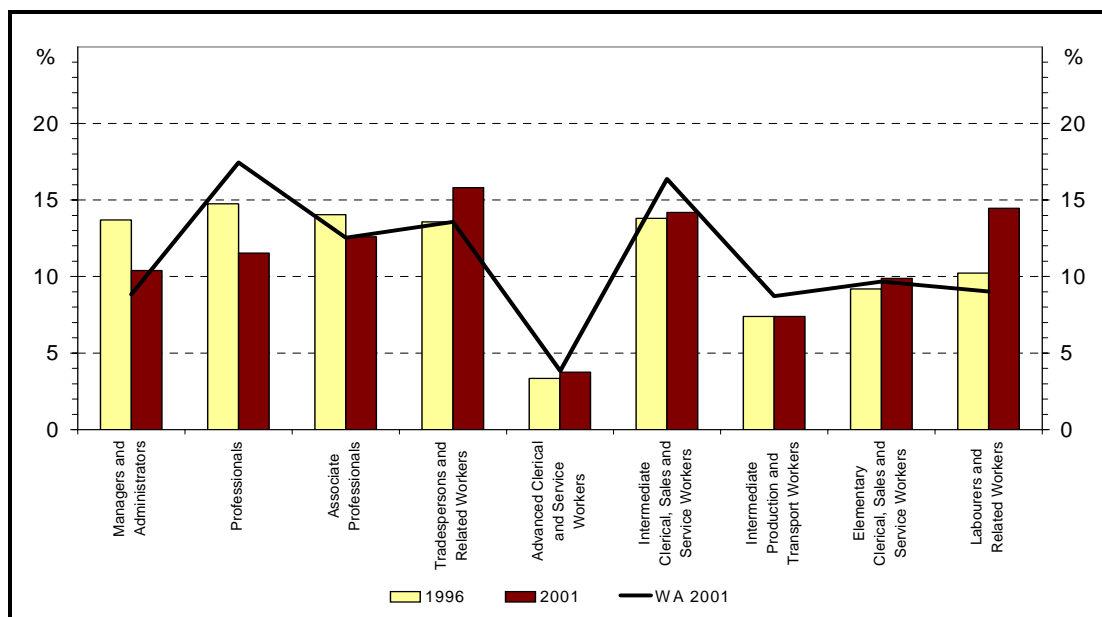
A comparison of the occupational profile of employment for Busselton and Western Australia is shown by Figure 2.64. Like most regional areas, Busselton had a relatively lower proportion of persons employed as professionals than the State in 2001 (12 per cent c.f. 17 per cent). On the other hand, the region had a relatively larger proportion of persons employed as labourers and related workers (14 per cent c.f. 9 per cent) and tradespersons and related workers (16 per cent c.f. 14 per cent).

Figure 2.63
Employment by Industry, Busselton: 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

Figure 2.64
Employment by Occupation, Busselton: 1996 & 2001*



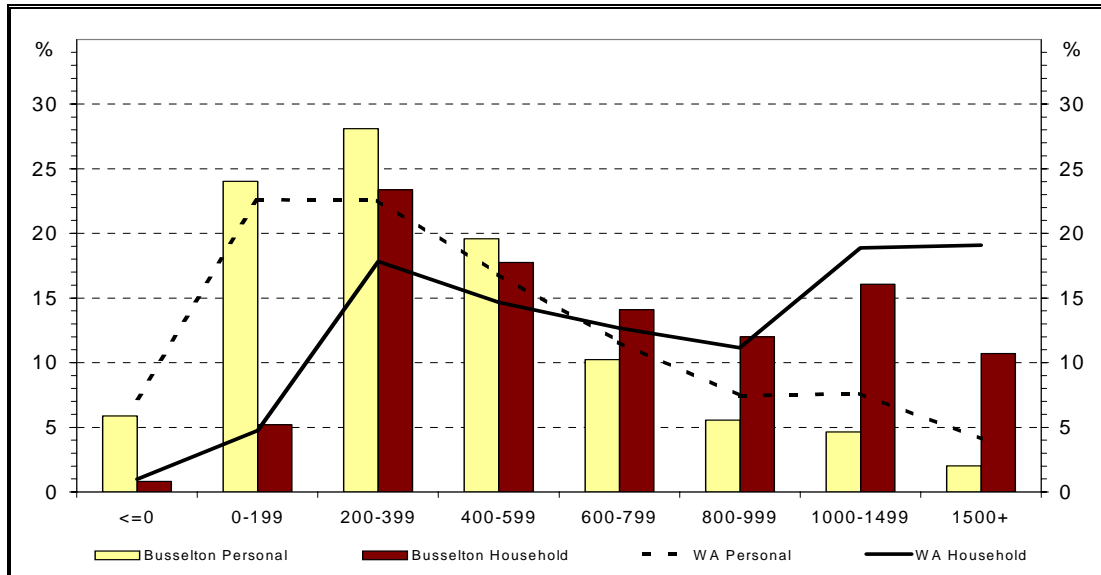
Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

2.9.9 Income Distribution

The income distribution of individuals and households in the Busselton area is weighted towards the lower end of the income range in comparison with the State population according to 2001 Census data (see Figure 2.65). About 78 per cent of individuals in Busselton earned less than \$600 per week in 2001 compared to 69 per cent of individuals for the State as a whole, while 47 per cent of households in Busselton had an income of less than \$600 per week compared to 38 per cent of households in Western Australia.

Figure 2.66 shows the movement in the mean taxable income for Busselton and Western Australia between 1985-86 and 2001-02 based on data from the ATO. While the mean taxable income for Busselton has moved in line with the State average over the past 17 years, it has consistently remained \$3,500 to \$5,500 lower than the mean taxable income for the State over this period.

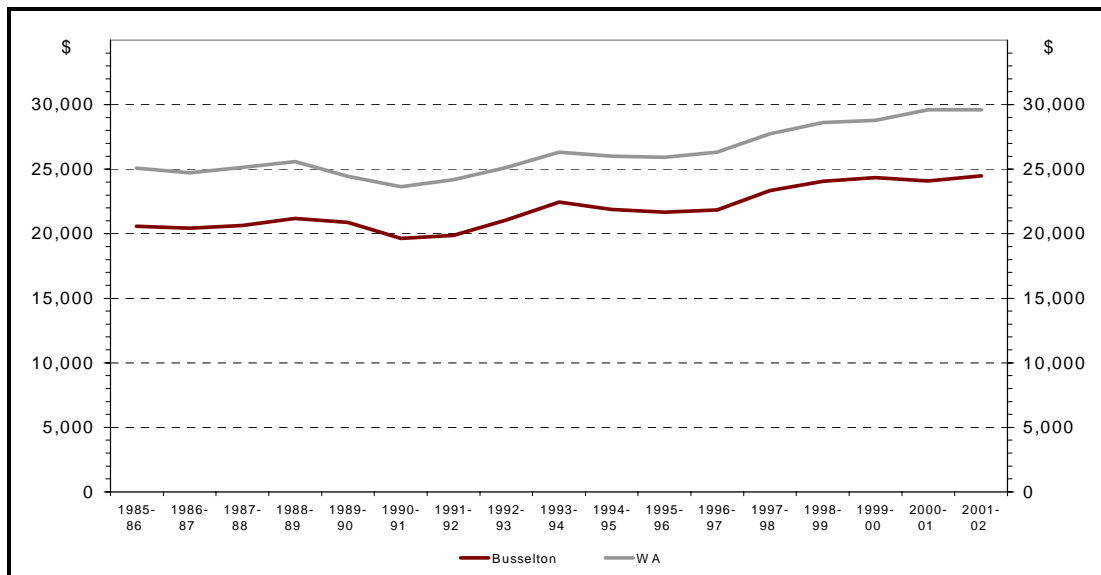
Figure 2.65
Income Distribution of Households and Individuals, Busselton: 2001*



Note: * Proportions have been calculated excluding those who did not state their income and/or only stated partial income.

Source: ABS, 2001 Census Basic Community Profiles.

Figure 2.66
Mean Taxable Income, Busselton: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

In regard to expenditure on lottery and gaming, Busselton had an average spend per adult of \$323 or 2.2 times that for all Western Australia.

2.10 Postcode Group 2: Hastings (3915) and Kwinana (6167)

2.10.1 Hastings, Victoria (Postal Area 3915)

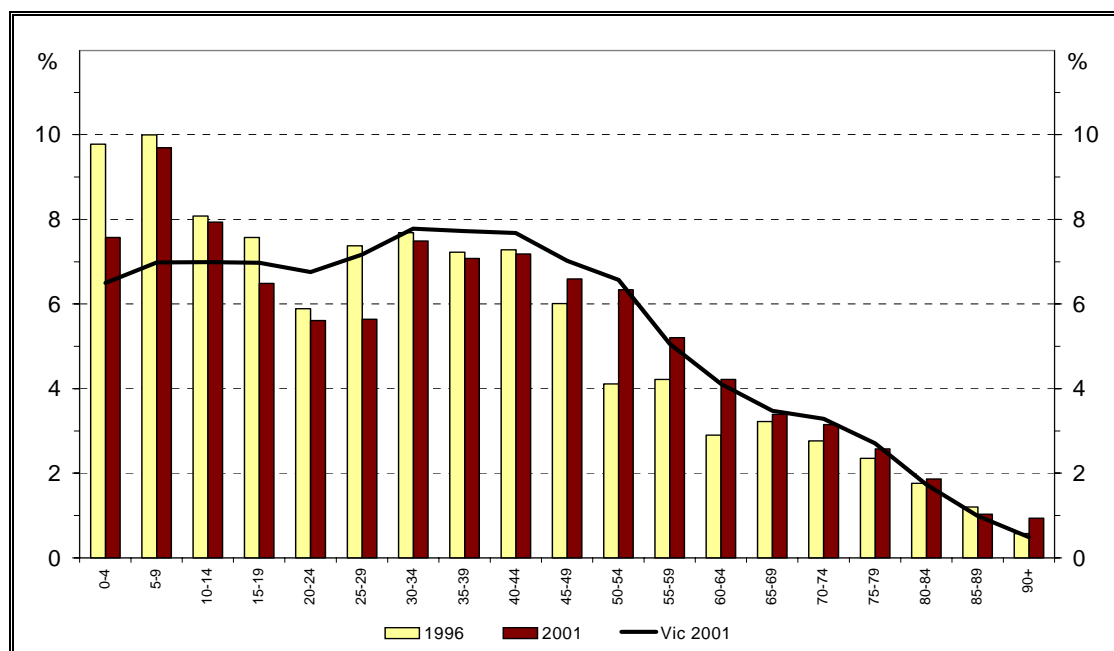
Hastings is located on the eastern coast of the Mornington Peninsula Shire about 61 kilometres south of Melbourne. It is situated on the western shore of Western Port, which is a natural deep-water harbour. Significant activities in the region include Bluescope Steel's Western Port plant which processes manufactured steel products, and HMAS Cerberus, which is the Royal Australian Navy's largest training establishment.

For the purpose of this study, Hastings refers to the area and population covered by post code 3915.

2.10.2 The People

Hastings had a usual resident population of 7,195 persons in 2001 according to the Census of Population and Housing. The adult population was 5,096, which represents about 71 per cent of the total population. The age distribution of the Hastings population is broadly similar to that of the Victorian population, particularly for those persons in middle to older age ranges (see Figure 2.67). However, there are some differences for younger populations. Hastings has a higher share of persons aged less than 15 years compared to the State (25 per cent c.f. 20 per cent), but a lower share of persons aged 15 to 29 years (18 per cent c.f. 21 per cent). The relatively lower share of persons aged 15 to 29 years for Hastings probably reflects migration of younger adults to other regions, particularly Melbourne, to pursue further education and career opportunities.

Figure 2.67
Age Distribution, Hastings: 1996 & 2001



Source: ABS, 1996 and 2001 Census Basic Community Profiles.

As Table 2.15 shows, a relatively larger proportion of the Hastings population in 2001 was born in Australia compared to the Victorian population (77 per cent c.f. 71 per cent). Almost 10 per cent of the Hastings population was born in the United Kingdom, which is higher than the share of the total State population born in the United Kingdom (4.4 per cent). These patterns reflect that migrants tend to settle in Melbourne rather than regional areas where employment opportunities and support networks are perceived to be more limited.

In terms of other population characteristics, Hastings had a slightly higher share of persons of Aboriginal and/or Torres Strait Islander origin compared to the State in 2001 (1.4 per cent c.f. 0.5 per cent). With respect to registered marital status, a relatively smaller proportion of the Hastings population aged 15 years and over was married in 2001 compared to the respective Victorian population (45 per cent c.f. 52 per cent). This outcome reflects that the rate of marriage failure in the Hastings area is relatively high with 16 per cent of the population aged 15 years and over being separated or divorced compared to 10 per cent of the State population.

Table 2.15
Country of Birth, Hastings: 1996 & 2001
(Per cent)

	Hastings 1996	Hastings 2001	Victoria 2001
Australia	79.3	77.0	70.6
United Kingdom	10.2	9.6	4.4
New Zealand	1.2	1.5	1.2
Netherlands	1.0	1.0	0.5
Germany	0.7	0.8	0.6
Ireland	0.4	0.4	0.2
Poland	0.1	0.2	0.4
Italy	0.2	0.2	1.9
Philippines	0.1	0.2	0.5
Yugoslavia, Federal Republic of	0.0	0.2	0.4

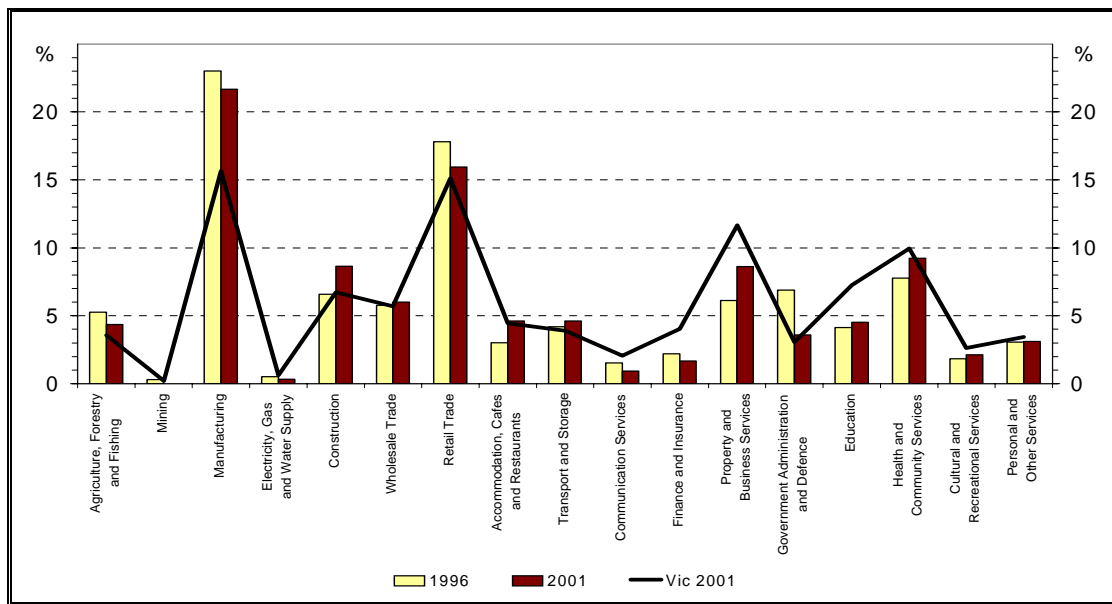
Source: ABS, 2001 Census Basic Community Profiles.

2.10.3 The Local Economy

Data from the most recent Census indicates that unemployment has been relatively high in Hastings. The region had an overall unemployment rate of 10.6 per cent in 2001 compared to a State average of 6.8 per cent. The youth unemployment rate was also considerably higher in 2001 (21.9 per cent c.f. 15.8 per cent for the State).

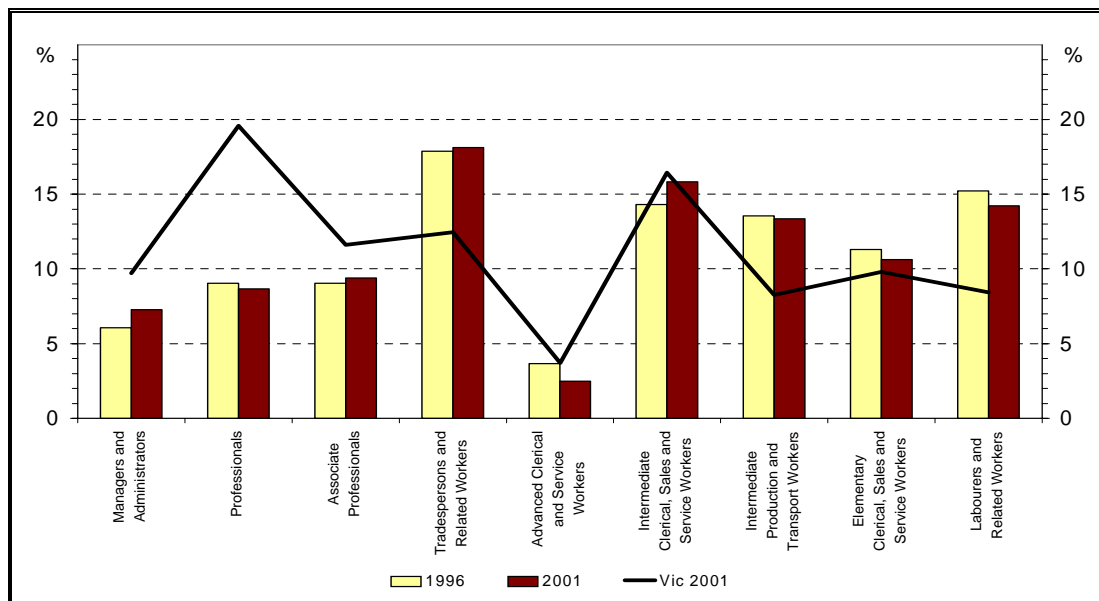
Figure 2.68 shows the profile of employed persons by their industry of employment for Hastings and Victoria. The most notable feature of the pattern of employment for Hastings is the importance of manufacturing. Manufacturing accounted for 22 per cent of the Hastings workforce compared to 16 per cent of the Victorian workforce in 2001. To a large degree this outcome would reflect employment associated with Bluescope Steel's Western Port plant which manufactures steel products. Other significant employing industries in Hastings in 2001 were retail trade (16 per cent of employed persons), health and community services (9.2 per cent), construction (8.7 per cent), and property and business services (8.6 per cent).

Figure 2.68
Employment by Industry, Hastings: 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

Figure 2.69
Employment by Occupation, Hastings: 1996 & 2001*



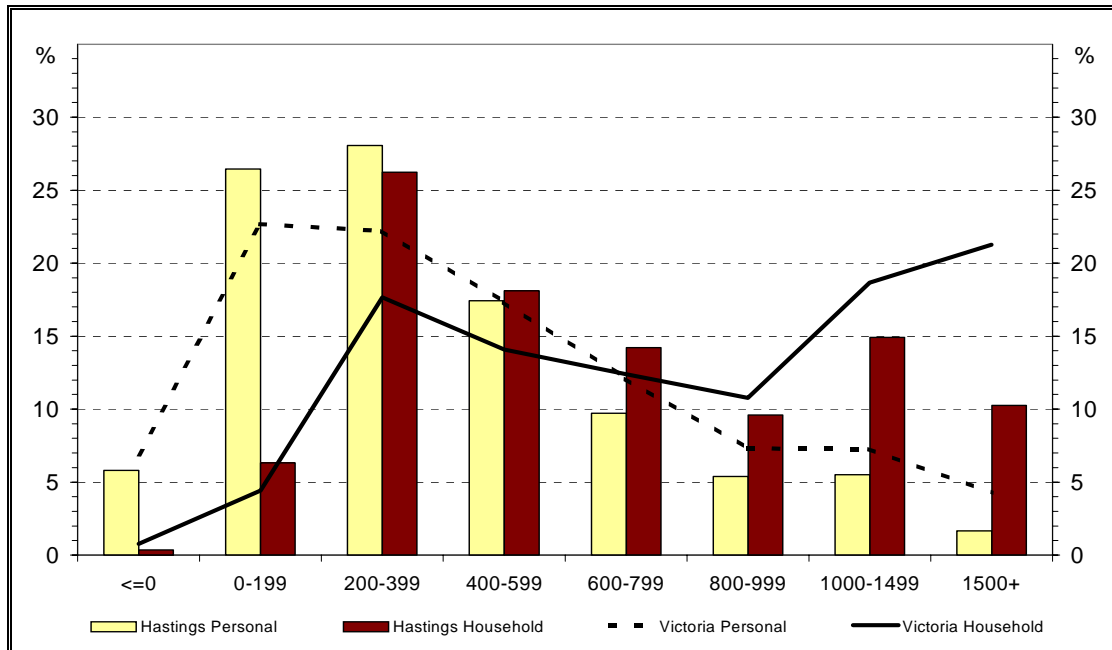
Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

In terms of the occupational profile of employment, Hastings tends to have a lower share of persons employed in relatively high skilled occupations such as managers and administrators, professionals and associate professionals (see Figure 2.69). A relatively high proportion of the region’s workers were employed as tradespersons and related workers, intermediate production and transport workers and labourers and related workers in 2001. The relatively greater number of persons employed as intermediate production and transport workers and labourers and related workers would reflect the greater importance of manufacturing and construction in the region respectively.

2.10.4 Income Distribution

Data from the 2001 Census reveals that the income distribution of the Hastings population was heavily weighed towards the lower end of the income range (see Figure 2.70). For instance, about 78 per cent of persons aged 15 years and over in Hastings had an income of less than \$600 per week compared to 69 per cent of persons in Victoria. Furthermore, 51 per cent of households in Hastings earned less than \$600 per week compared to 37 per cent of households in Victoria.

Figure 2.70
Income Distribution of Households and Individuals, Hastings: 2001*

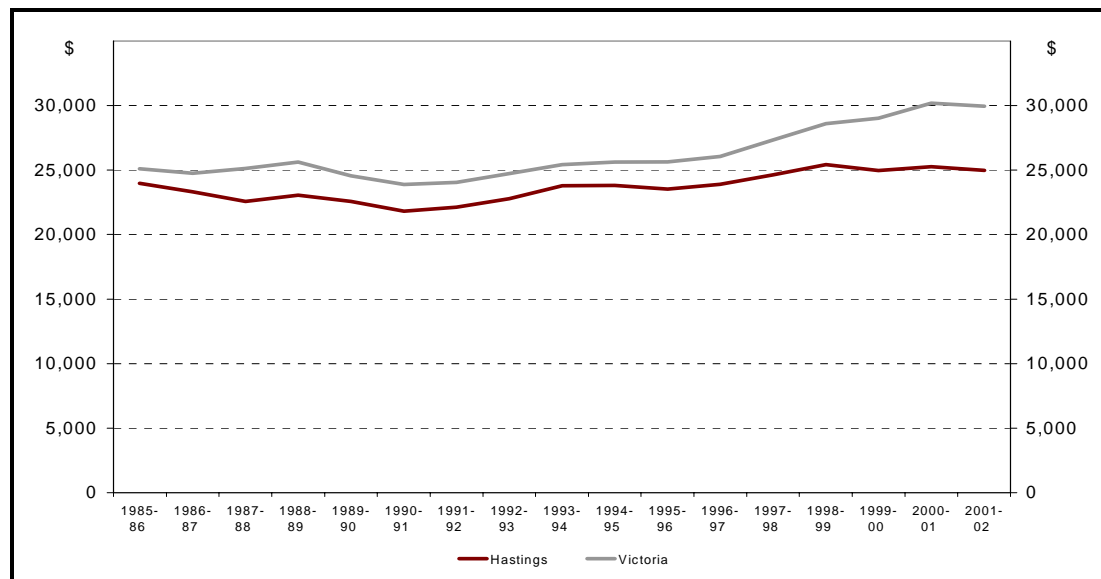


Note: * Proportions have been calculated excluding those who did not state their income and/or only stated partial income.

Source: ABS, 1996 and 2001 Census Basic Community Profiles.

Figure 2.71 shows the movement in the mean taxable income for Hastings and Victoria from 1985-86 to 2001-02 based on data from the ATO. The mean taxable income for the Hastings region has consistently been below the Victorian average. However, the average income for the region did tend to move in line with the State average up until the mid 1990s, but it stopped rising in the late 1990s whereas the Victorian average taxable income tended to continue growing. The result was that the average taxable income for Hastings was about \$5,000 below the Victorian average in 2001-02.

Figure 2.71
Mean Taxable Income, Hastings: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

2.10.5 Recreation and Gambling for Post Code Area: Hastings

The gambling environment for Hastings has the following characteristics:

- there are 3 venues operating in Hastings;
- the number of gaming machines has remained stable at 123 machines from end 1999 to mid-2004, while the number in the greater Mornington Peninsula region has also remained stable at 864 machines over the same period; and
- net gaming revenue per machine increased from \$6,340 in December quarter of 1999 to \$7,176 in June quarter of 2004; those figures are similar to the rise in average net gaming revenue per machine for Mornington Peninsula from \$6,399 in December quarter 1999 to \$7,299 in June quarter 2004. Both Hastings and the Mornington Peninsula have a net gaming revenue per machine below the Victorian average.

In terms of other recreation activities, football, cricket and bowling clubs operate in the region, while there is a family leisure centre and swimming pool. The elderly population is catered for by a senior citizens club and RSL.

2.10.6 Kwinana, Western Australia (Postal Area 6167)

The township of Kwinana is located about 40km south of Perth on the coast between Fremantle and Rockingham. Kwinana hosts an industrial estate and is the home of a BP petroleum refinery. Other manufacturing activities undertaken in the region include processing of gas, minerals, chemicals and heavy engineering.

Unless otherwise stated, Kwinana in this report refers to the area covered by post code 6167. About 79 per cent of the total population in the Kwinana local government area are based in post code 6167.

2.10.7 The People

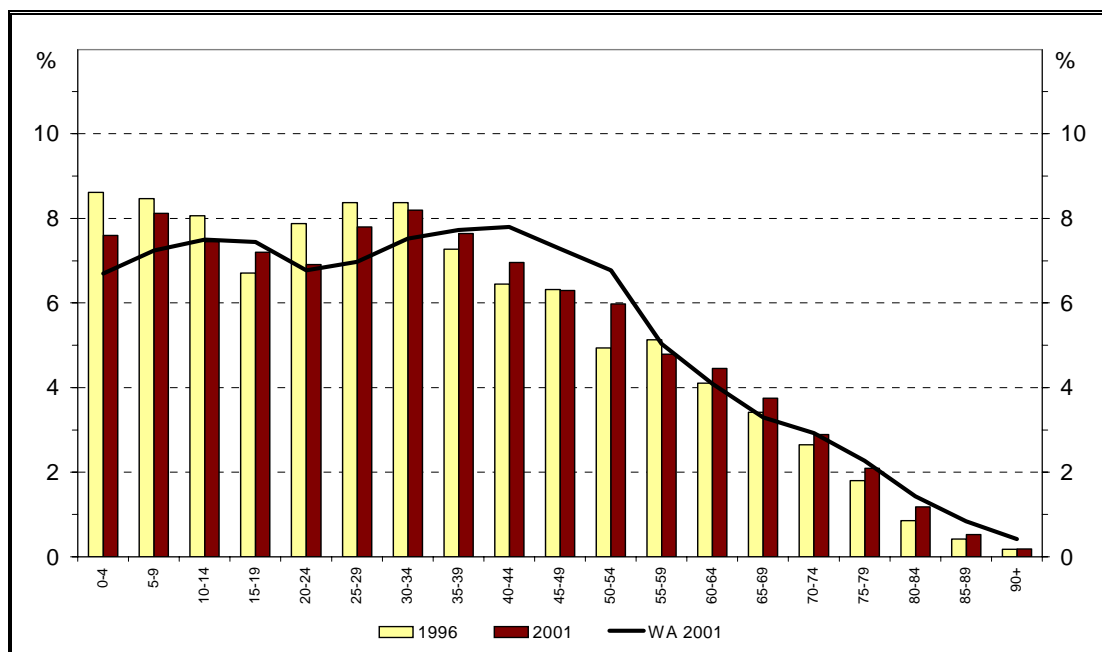
Results from the 2001 Census indicates that Hastings had a usual resident population of 16,630 persons. About 73 per cent of the total population was of an adult age (i.e., 18 years and over). Figure 2.72 shows the age distribution of the Kwinana and Western Australian populations. The age distributions of both populations were broadly similar. The main points of difference are that Kwinana had a relatively lower share of persons aged in the 40's and a higher share aged less than 10 years and 25 to 34 years compared to the State.

Census data indicates a similar proportion of Kwinana's population in 2001 was born in Australia in comparison with the overall State population (65 per cent and 67 per cent respectively). However, a larger share of the Kwinana population than the State population was born in the United Kingdom (18 per cent c.f. 11 per cent).

Indigenous representation among the Kwinana population was slightly higher than among the Western Australian population in 2001. About 4.4 per cent of the Kwinana population were of Aboriginal and/or Torres Strait Islander origin compared to 3.2 per cent of the State population.

In terms of registered marital status, about 46.0 per cent of residents aged 15 years and over in Kwinana were married at the time of the 2001 Census compared to 51 per cent of the State population. This difference largely reflects that a higher proportion of residents in Kwinana were separated or divorced compared for the State as a whole (14 per cent c.f. 11 per cent).

Figure 2.72
Age Distribution, Kwinana: 1996 & 2001



Source: ABS, 1996 and 2001 Census Basic Community Profiles.

Table 2.16
Country of Birth, Kwinana: 1996 & 2001
(Per cent)

	Kwinana 1996	Kwinana 2001	WA 2001
Australia	64.9	65.1	67.1
United Kingdom	20.4	18.0	10.9
New Zealand	1.6	2.7	2.4
Germany	0.9	0.7	0.5
Netherlands	0.8	0.7	0.6
Italy	0.6	0.5	1.2
South Africa	0.5	0.5	0.8
India	0.6	0.4	0.7
Ireland	0.4	0.4	0.5
Philippines	0.4	0.3	0.3

Source: ABS, 2001 Census Basic Community Profiles.

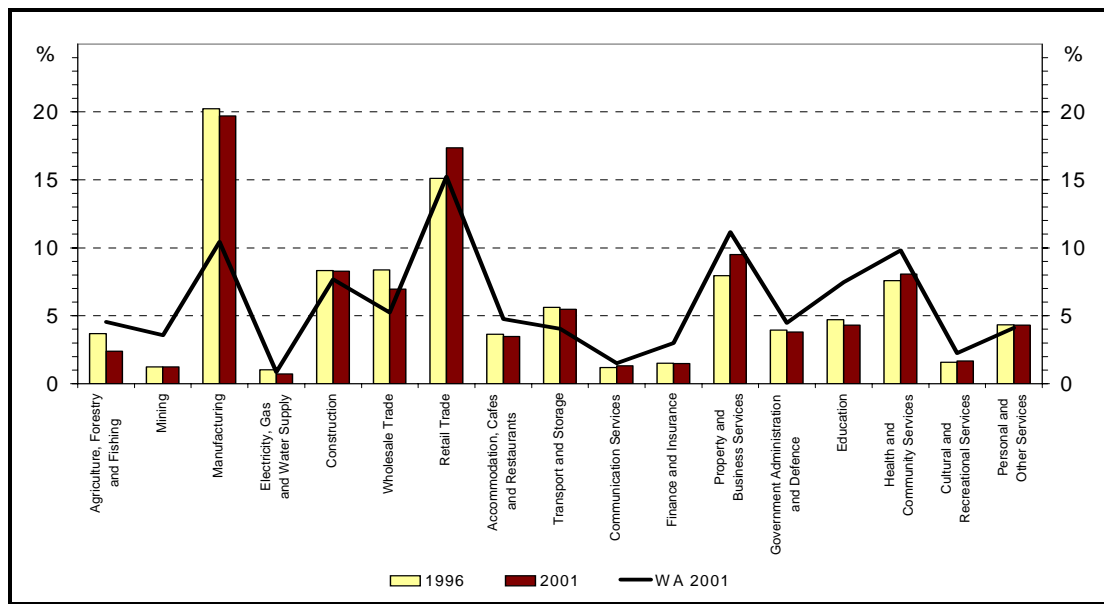
2.10.8 The Local Economy

Unemployment in Kwinana was significantly higher than for Western Australia as a whole in 2001; Kwinana had an overall unemployment rate of 13.1 per cent compared to an unemployment rate of 7.5 per cent for Western Australia. Youth unemployment was also considerably higher in the Kwinana region at the time of the 2001 Census (27.1 per cent c.f. 16.4 per cent for the State). More recent estimates of unemployment suggests that unemployment remains quite high in the Kwinana post code defined for this study. Small Area Labour Markets data indicates that the Kwinana (T) Statistical Local Area had an unemployment rate of 10.5 per cent in the September quarter 2004, while the overall State unemployment rate was only 5.4 per cent.

Figure 2.73 shows the profile of employment by industry of employment for Kwinana and Western Australia. Reflecting the importance of industrial activities to the local economy, about 20 per cent of all workers in Kwinana in 2001 were employed in manufacturing compared to 10 per cent of workers for the State as a whole. Relatively more workers in Kwinana were also employed in retail trade (17 per cent c.f. 15 per cent), which was the second largest employing industry sector in the region in 2001. Compared to the State, Kwinana had a relatively smaller share of persons employed in education, mining and agriculture.

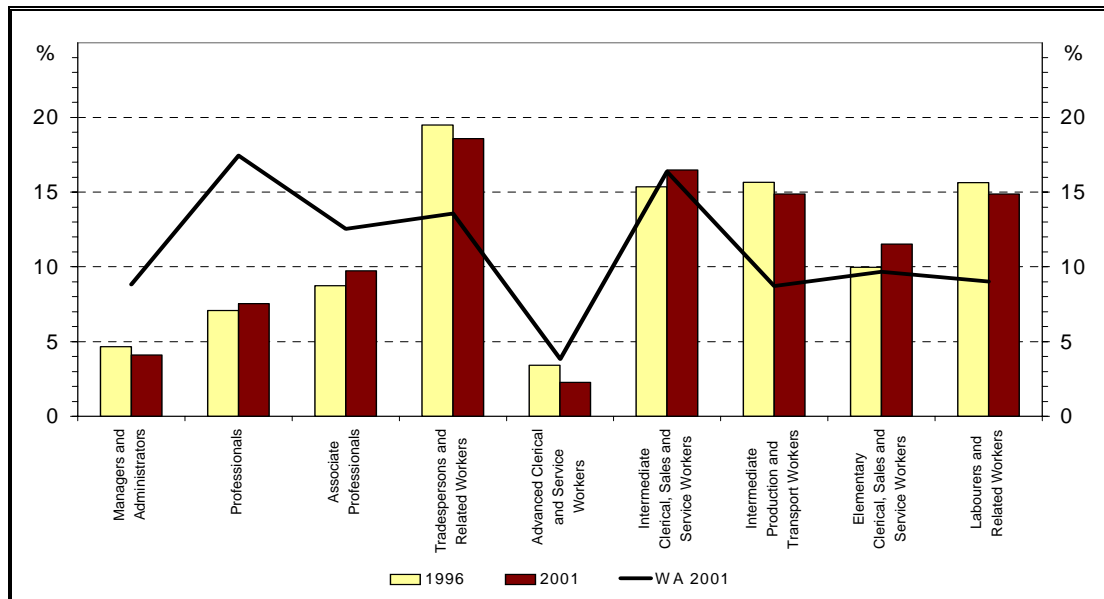
A comparison of the occupational profile of employment for Kwinana and Western Australia is illustrated by Figure 2.74. A higher share of Kwinana workers in 2001 were employed in relatively lower skilled occupations such as intermediate production and transport workers, labourers and related workers, and elementary clerical, sales and service workers. This outcome would in part reflect the impact that the significance of manufacturing has on the occupational profile of local employment. Kwinana also had a significantly greater share of workers employed as tradespersons and related workers. Relatively highly skilled occupations such as managers and administrators, professionals and associate professionals were significantly under-represented in the region compared to the State as a whole.

Figure 2.73
Employment by Industry, Kwinana: 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

Figure 2.74
Employment by Occupation, Kwinana: 1996 & 2001*

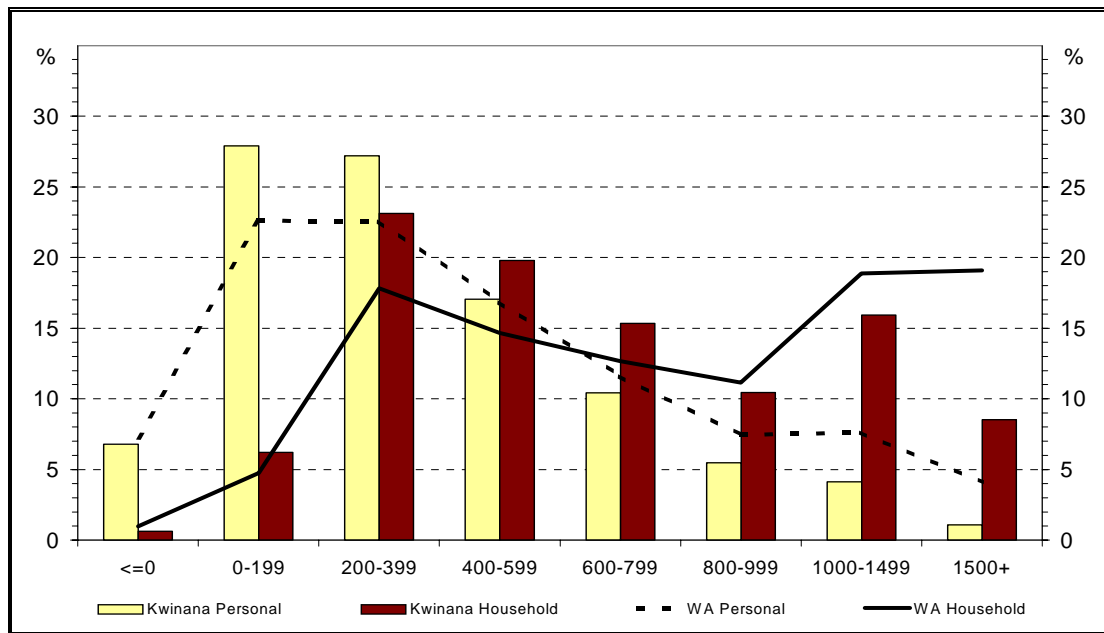


Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

2.10.9 Income Distribution

Census data indicates that the Kwinana population is relatively less affluent in economic terms compared to the entire State population (see Figure 2.75). About 79 per cent of persons aged 15 years and over in Kwinana in 2001 has an individual income of less than \$600 per week compared to 69 per cent of the respective population in the State. The picture for households is similar with 50 per cent of households in Kwinana having an income of less than \$600 per week compared to 38 per cent of households in the State.

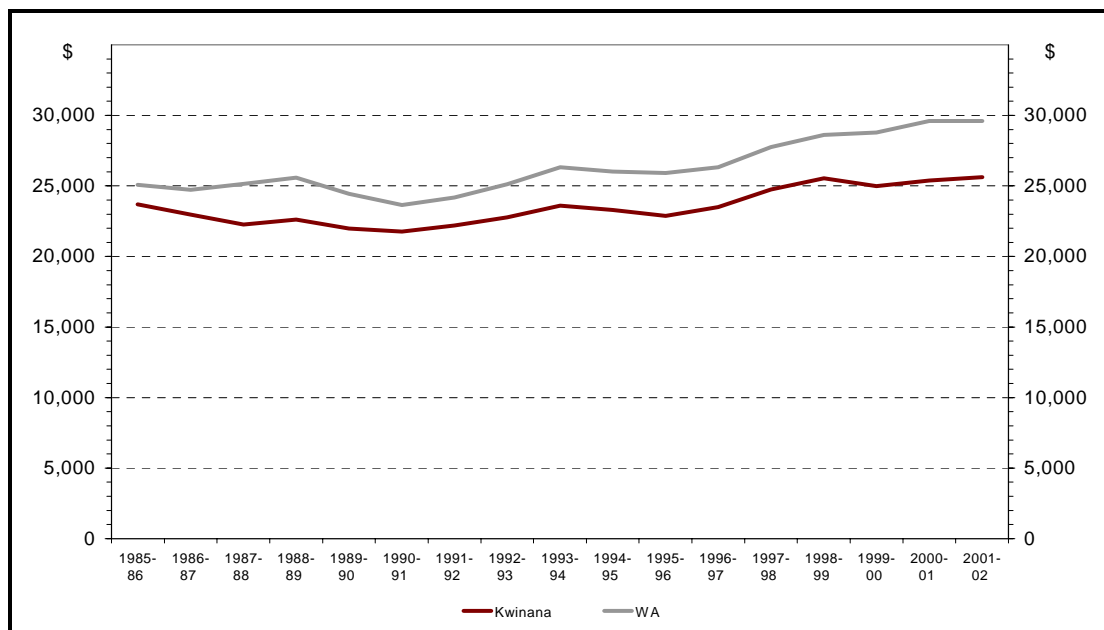
Figure 2.75
Income Distribution of Households and Individuals, Kwinana: 2001*



Note: * Proportions have been calculated excluding those who did not state their income and/or only stated partial income.

Source: ABS, 2001 Census Basic Community Profiles.

Figure 2.76
Mean Taxable Income, Kwinana: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

Consistent with the Census data, taxation data indicates that the mean taxable income in Kwinana has been consistently below the mean for the State over the period from 1985-86 to 2001-02 (see Figure 2.76). Kwinana also has not experienced the same rate of growth in mean taxable income as Western Australia and, as a consequence, the difference between the two has grown from about \$1,000 in 1985-86 to about \$4,000 in 2001-02.

2.10.10 Recreation and Gaming

Demand for recreation activities in Kwinana have grown over recent years in response to population growth as the area has become more economically developed. A large sports centre has been built to provide facilities for the community and the area is home to one of the largest drag and speed racing motorplexes in the State.

Greyhound racing, TAB, lotto and scratchies are some of the major forms of gambling available, and the large proportion of English migrants in the area has resulted in a significant bingo and "two-up" culture with a strong focus on clubs and hotels. The average per adult expenditure on lotteries was \$410 in 2002-03 or 2.9 times the average for Western Australia.

2.11 Postcode Group 3: Warburton (3799) and Mundaring (6073)

2.11.1 Warburton, Victoria (Postal Area 3799)

Warburton is located 75 kilometres east of the Melbourne CBD. Situated in the foothills of the Great Dividing Range, Warburton (incorporating surrounding rural districts) is dominated by its vast areas of forest and parkland. The Warburton highway and Yarra River traverses the suburb. Its position in the Upper Yarra Valley means that Warburton forms much of the catchment area for metropolitan Melbourne's water resources. The area also features large parts of the Yarra State Forest and falls within the Shire of Yarra Ranges. It also has no electronic gaming machines with the nearest gaming venue being located in Yarra Junction.

Unless otherwise stated, Warburton in this study refers to the area covered by post code 3799. This area includes the town of Warburton which has a population of about 2,500 people.

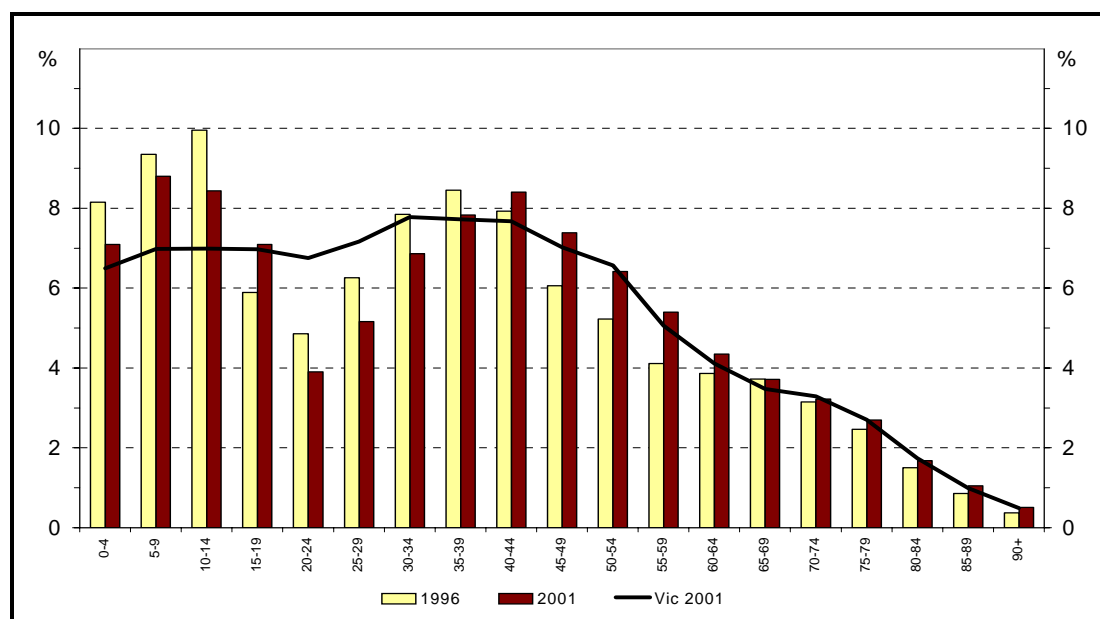
2.11.2 The People

Data from the 2001 Census indicates that Warburton had a total usual resident population of 6,167 persons. About 71 per cent of the population was of adult age.

Figure 2.77 shows a comparison of the age distribution of the Warburton and Victorian populations. While the age distribution of the population aged 50 years and over was similar for Warburton and Victoria, there were some interesting differences for the population below this age. Warburton had a lower share of persons aged between 20 and 34 years relative to the State in 2001 (16 per cent c.f. 22 per cent), and a higher share of persons aged less than 15 years (24 per cent c.f. 20 per cent). Under-representation among 20 to 34 year olds suggests that a significant number of young adults leave the region to pursue education and career opportunities elsewhere, particularly Melbourne.

In 2001, almost 77 per cent of the population of Warburton was born in Australia, which is higher than the share of the total Victorian population born in Australia (71 per cent). As Table 2.17 shows, the United Kingdom, Germany, the Netherlands and New Zealand were the major countries of birth for migrants living in Warburton.

Figure 2.77
Age Distribution, Warburton: 1996 & 2001



Source: ABS, 1996 and 2001 Census Basic Community Profiles.

In terms of other population characteristics, the representation of Indigenous persons in the Warburton population is similar to that for the total Victorian population (0.6 per cent of total persons in the region were of Indigenous descent in 2001 compared to 0.5 per cent for the State).

In terms of the registered marital status of the Warburton population, a similar share of persons aged 15 years and over in the region compared to the State were married at the time of the 2001 Census (49 per cent c.f. 51 per cent). However, a relatively higher share of the region's population (15 per cent) were separated or divorced relative to the State (10 per cent).

Table 2.17
Country of Birth, Warburton: 1996 & 2001
(Per cent)

	Warburton 1996	Warburton 2001	Victoria 2001
Australia	77.8	76.6	70.6
United Kingdom	7.4	7.4	4.4
Germany	1.5	1.6	0.6
Netherlands	1.2	1.5	0.5
New Zealand	1.0	1.2	1.2
Italy	0.3	0.4	1.9
South Africa	0.2	0.3	0.3
Ireland	0.2	0.2	0.2
United States of America	0.2	0.2	0.2
Poland	0.4	0.2	0.4

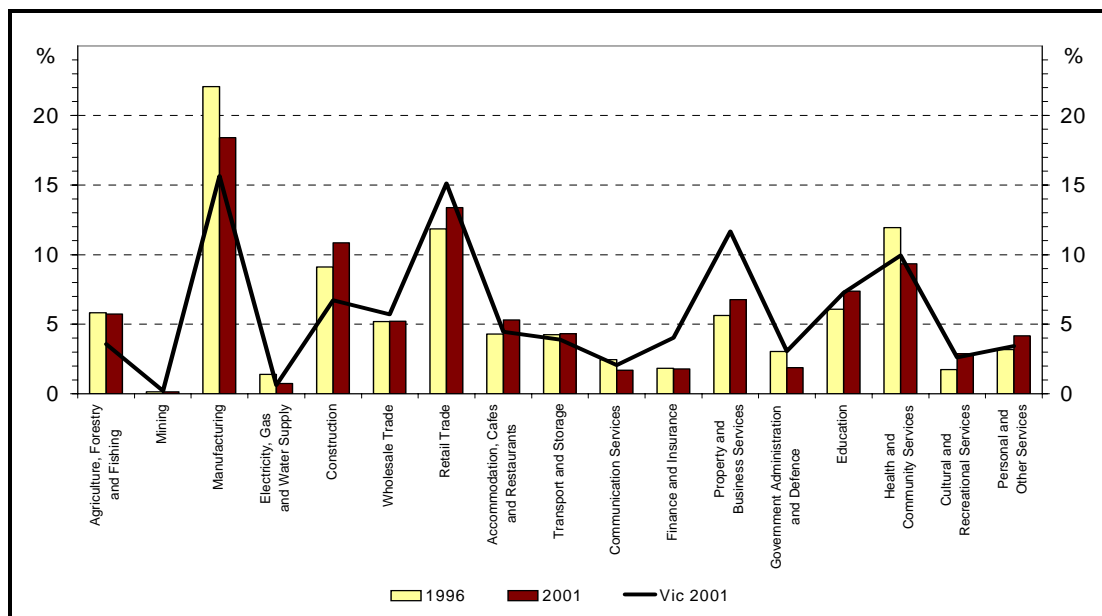
Source: ABS, 2001 Census Basic Community Profiles.

2.11.3 The Local Economy

Unemployment in Warburton has been moderately higher in comparison with the State. In 2001, 9.6 per cent of the total labour force was unemployed compared to 6.8 per cent of the State labour force. The rate of youth unemployment was only marginally higher in Warburton compared to the State in 2001 (16.8 per cent c.f. 15.8 per cent).

Figure 2.78 shows the profile of employment by industry for Warburton and Victoria as indicated by Census data. In 2001, Warburton had a relatively larger share of persons employed in construction (11 per cent c.f. 6.7 per cent), manufacturing (18 per cent c.f. 16 per cent) and agriculture (5.7 per cent c.f. 3.6 per cent) compared to the State. The services sectors, particularly property and business services, were under-represented in Warburton. Overall, manufacturing and retail trade were the two largest employing industries in the region, which also applies to the State as a whole.

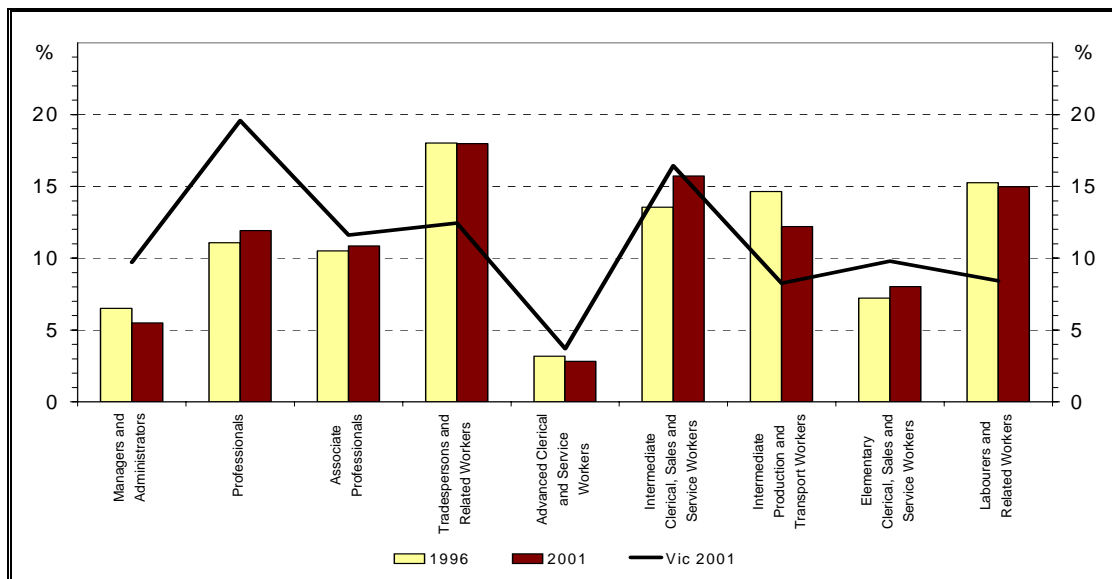
Figure 2.78
Employment by Industry, Warburton: 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

Figure 2.79 shows the occupational profile of employment for Warburton and Victoria. Reflecting the relatively greater importance of construction to employment in the Warburton region, a relatively larger share of the Warburton workforce were employed as tradespersons and related workers compared to the State workforce in 2001 (18 per cent c.f. 12 per cent). Warburton also had a higher share of persons employed in relatively lower skilled occupations such as intermediate production and transport workers, and labourers and related workers. In comparison with the State, Warburton had relatively fewer workers employed as managers and administrators, professionals and associate professionals, all of which tend to be more highly skilled occupations.

Figure 2.79
Employment by Occupation, Warburton: 1996 & 2001*

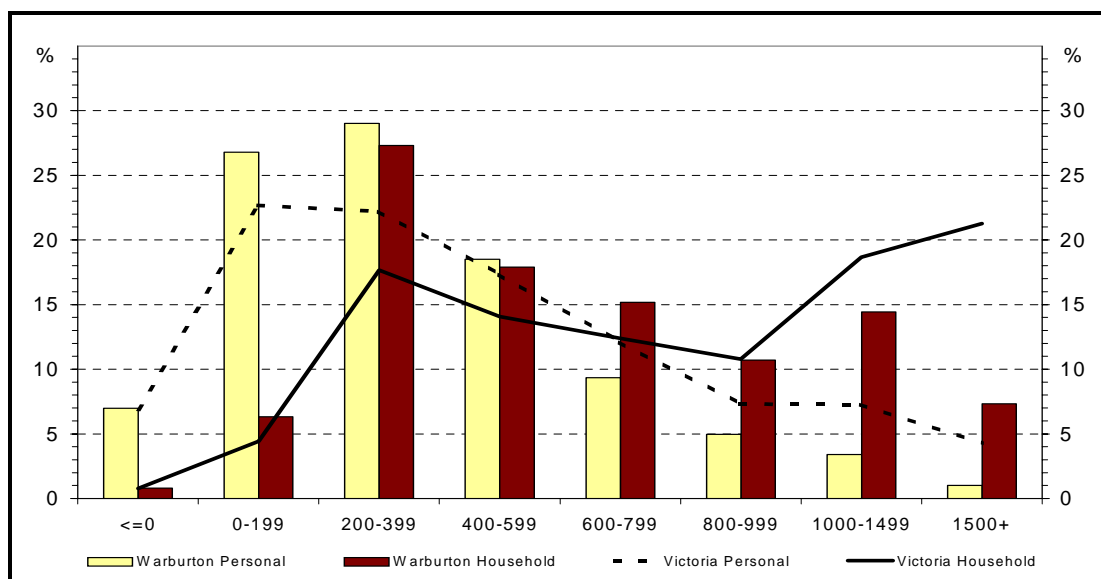


Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

2.11.4 Income Distribution

Like most regional areas, the Warburton population is relatively less affluent in economic terms compared to the State population. Census data in Figure 2.80 shows that a greater share of the Warburton population were in lower income brackets compared to the State population in 2001. About 81 per cent of individuals aged 15 years and over in Warburton had an income of less than \$600 per week in 2001 compared to 69 per cent in Victoria. In terms of households, 52 per cent in Warburton had an income of less than \$600 per week compared to 37 per cent in Victoria.

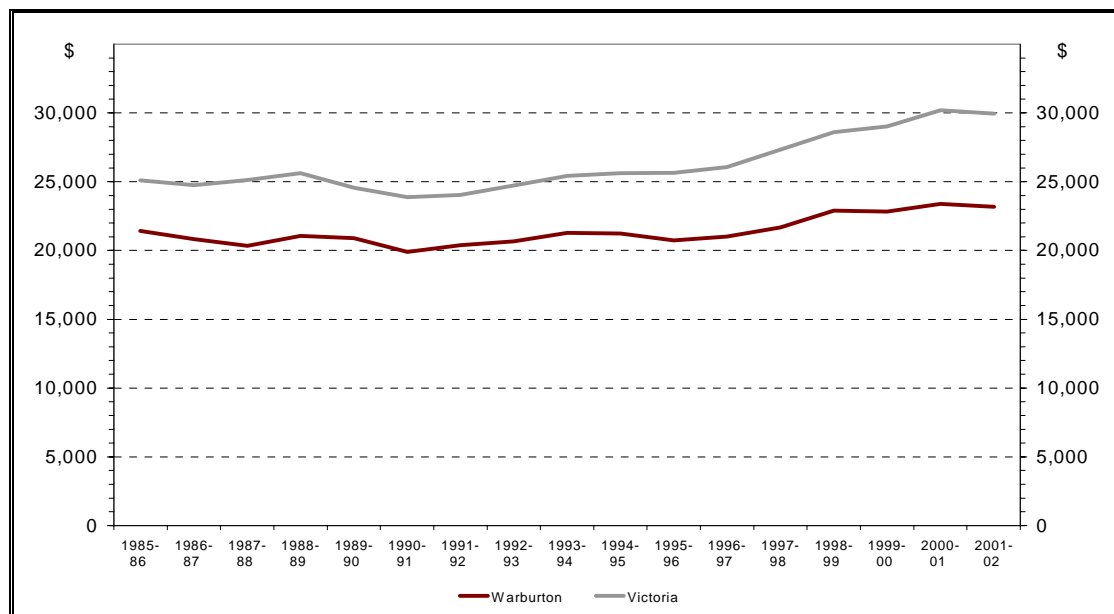
Figure 2.80
Income Distribution of Households and Individuals, Warburton: 2001*



Note: * Proportions have been calculated excluding those who did not state their income and/or only stated partial income.
Source: ABS, 2001 Census Basic Community Profiles.

Consistent with the Census data, data from the Australian Taxation Office indicates that average taxable income in Warburton has been consistently lower than the State average over the last 17 years (see Figure 2.81). The mean taxable income in Warburton in 1985-86 was about \$21,500, which was about \$3,500 lower than the State average of about \$25,000. While the mean taxable income for Warburton closely followed movements in the average State income during the late 1980s and early 1990s, during the late 1990s the average mean income for Warburton started to rise more slowly than the State average such that the mean taxable income for Warburton in 2001-02 was about \$6,500 less than the State average.

Figure 2.81
Mean Taxable Income, Warburton: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

2.11.5 Recreation and Gambling for Post Code Area: Warburton

Warburton has no electronic gaming machine venues. The nearest gaming venue is located in Yarra Junction 10km away from Warburton at Upper Yarra RSL which has 30 machines, and in Healesville 16km away from Warburton at Healesville RSL which has 50 machines.

The characteristics of the gaming environment in the Shire of Yarra Ranges, the local government area in which Warburton falls, is summarised in Table 2.18. The average losses per adult on EGMs in the Yarra Ranges are approximately 75 per cent of the average total losses for all Victoria.

There have been 8 venues operating in Yarra Ranges Shire since June 1999. The number of gaming machines in the area increased from 393 in December quarter 1999 to 412 in June quarter 2004. Net gaming revenue per machine fell from \$6,335 in December quarter 1999 to \$6,234 in June quarter 2004.

Table 2.18
Gambling Indicators for Shire of Yarra Ranges, 2003-04

Venues: 2004 ¹	8
EGMs: 2004	412
EGMs per 1,000 adults (2003-04)	6.8
Gaming Losses 2003/04, \$ million	\$29.8
Losses per Adult 2003-04	\$488
Cumulative Losses since 1992-93 (\$ millions: adjusted to 2004 dollars)	\$286
Cumulative Losses per Adult since 1992-93 (adjusted to 2004 dollars)	\$4,685

Note: ¹ Number of electronic gaming machines at 30 June 2004 in hotels and clubs.

Source: Victorian Local Government Association.

2.11.6 Mundaring, Western Australia (Postal Area 6073)

The town of Mundaring is located in the Mundaring Shire just over 30 kilometres east of Perth. Mundaring is a small town situated in a rural setting. Nature based tourism activities are significant within the region.

Unless otherwise stated, Mundaring in this study refers to the area covered by post code 6073.

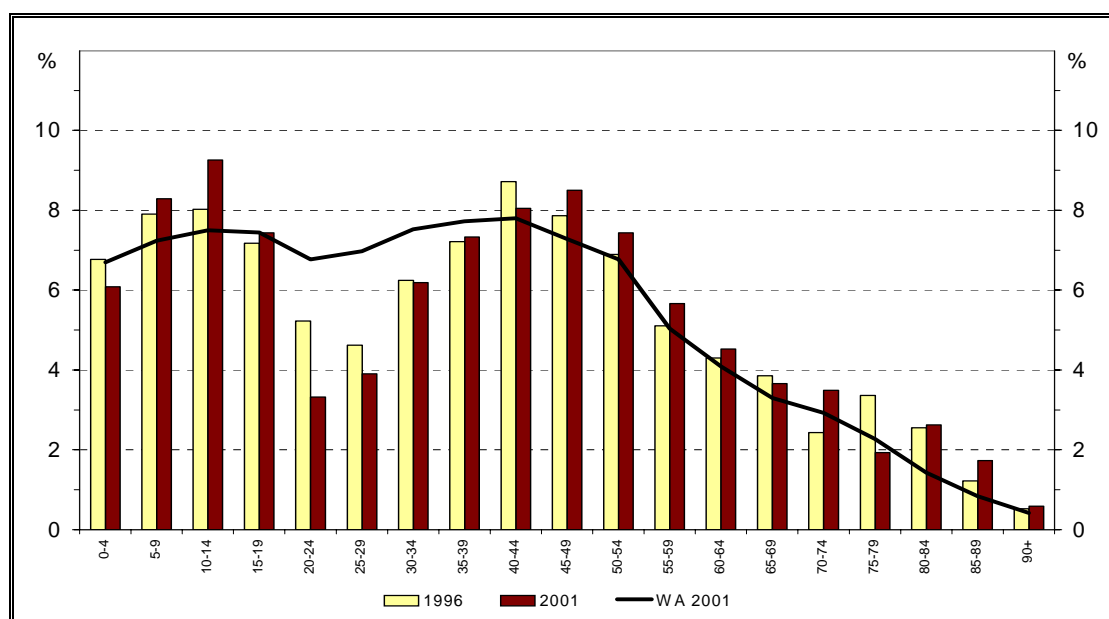
2.11.7 The People

Census data indicates that Mundaring had a usual resident population of 2,985 in 2001. About 72 per cent of the population were of adult age (i.e., 18 years and over).

There are some key differences between the Mundaring and Western Australian populations (see Figure 2.82). Mundaring tends to have a larger share of people in the very old and very young age groups compared to the State, and a significantly lower share of persons in the young to middle aged adult age group. In 2001, 32 per cent of the Mundaring population was aged 50 years and over compared to 27 per cent of the State population, while 31 per cent was aged less than 20 years compared to 29 per cent of the State population. The difference was more significant with younger adults, with only 21 per cent of the Mundaring population being aged 20 to 39 years compared to 29 per cent of the State population.

A similar proportion of the Mundaring and Western Australian population in 2001 were born in Australia (69 per cent and 67 per cent respectively, see Table 2.19). An area of difference is that a much larger share of the Mundaring population were born in the United Kingdom compared to the State population (almost 18 per cent c.f. 11 per cent). New Zealand, the Netherlands, South Africa and Italy were the other most common birth places of migrants in the region.

Figure 2.82
Age Distribution, Mundaring: 1996 & 2001



Source: ABS, 1996 and 2001 Census Basic Community Profiles.

Table 2.19
Country of Birth, Mundaring: 1996 & 2001
(Per cent)

	Mundaring 1996	Mundaring 2001	Western Australia 2001
Australia	68.8	68.8	67.1
United Kingdom	19.1	17.5	10.9
New Zealand	1.7	1.7	2.4
Netherlands	1.2	0.8	0.6
South Africa	0.6	0.7	0.8
Italy	0.6	0.7	1.2
Germany	0.8	0.5	0.5
United States of America	0.6	0.4	0.3
Ireland	0.3	0.4	0.5
India	0.2	0.4	0.7

Source: ABS, 2001 Census Basic Community Profiles.

In terms of other population characteristics, Indigenous representation is lower in Mundaring compared to the State as a whole. In the 2001 Census, 1.1 per cent of the population indicated they were of Aboriginal and/or Torres Strait Islander descent compared to 3.2 per cent of the State population.

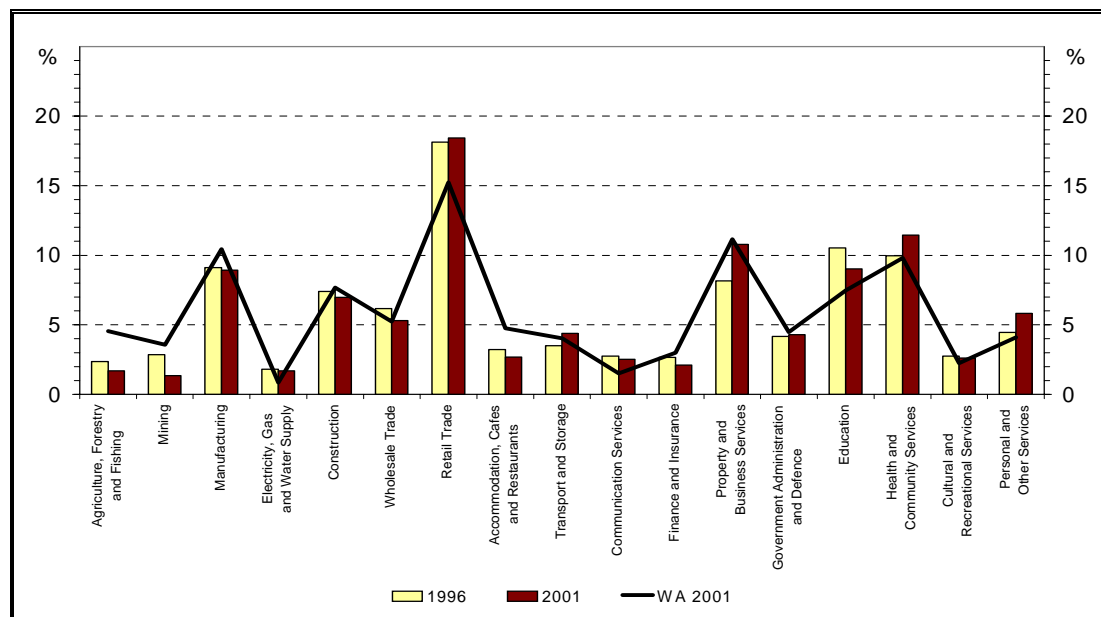
In terms of registered marital status, a higher proportion of Mundaring persons aged 15 years and over in 2001 were married compared to the respective State population (58 per cent c.f. 51 per cent). This outcome reflects that a relatively larger proportion of the State population had never been married compared to the Mundaring population (33 per cent c.f. 24 per cent).

2.11.8 The Local Economy

At the time of the 2001 Census, unemployment in the Mundaring region was slightly lower than for the State as a whole. The overall unemployment rate in Mundaring was 6.8 compared to the State average of 7.5 per cent. However, the youth unemployment rate for Mundaring was slightly higher compared to the State average (18.6 per cent c.f. 16.4 per cent).

Figure 2.83 shows the profile of employment by industry for Mundaring and Western Australia as indicated by Census data. The largest employing industry in Mundaring in 2001 was retail trade, which employed 18 per cent of all workers in the region. In fact, the share of the workforce in retail trade was higher than for the State as a whole (15 per cent), which probably reflects the impact of tourism on the local economy, and/or that Mundaring acts as a local service centre. Service industries, such as health and community services and property and business services, were also major employers in the region, while a significant proportion of the population was also employed in manufacturing. The only industry sectors in the region in which employment was under-represented compared to the State were agriculture (1.7 per cent c.f. 4.5 per cent) and accommodation, cafes and restaurants (2.7 per cent c.f. 4.7 per cent).

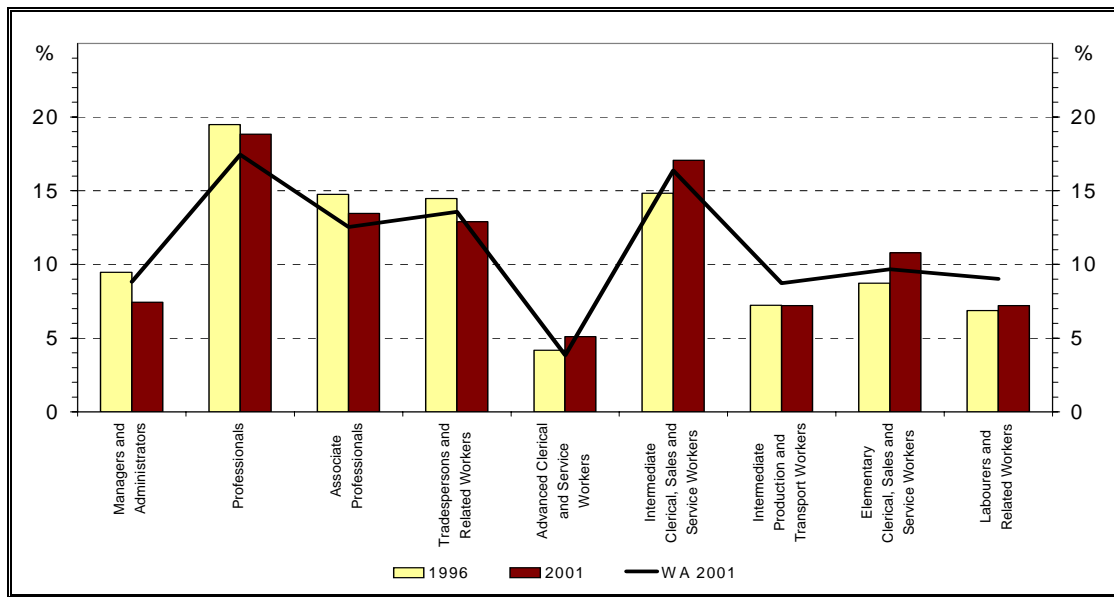
Figure 2.83
Employment by Industry, Mundaring: 1996 & 2001*



Note: * Proportions have been calculated excluding non-classifiable economic units and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

The occupational profile of employment for Mundaring and Western Australia is illustrated in Figure 2.84. The occupation profile of employment for the region is very similar to the profile for Western Australia as a whole.

Figure 2.84
Employment by Occupation, Mundaring: 1996 & 2001*

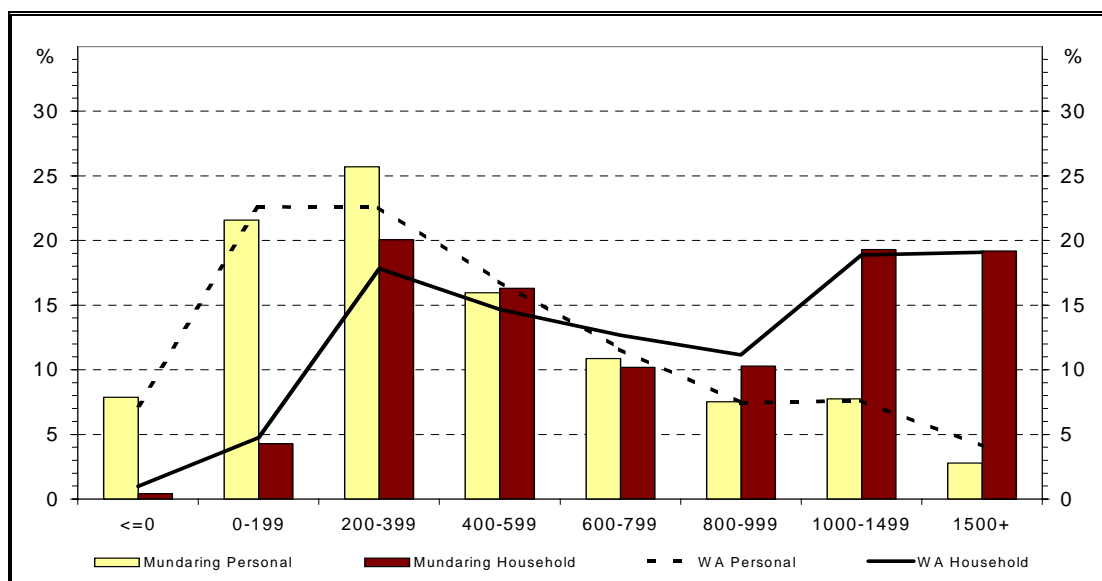


Note: * Proportions have been calculated excluding inadequately described and not stated.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

2.11.9 Income Distribution

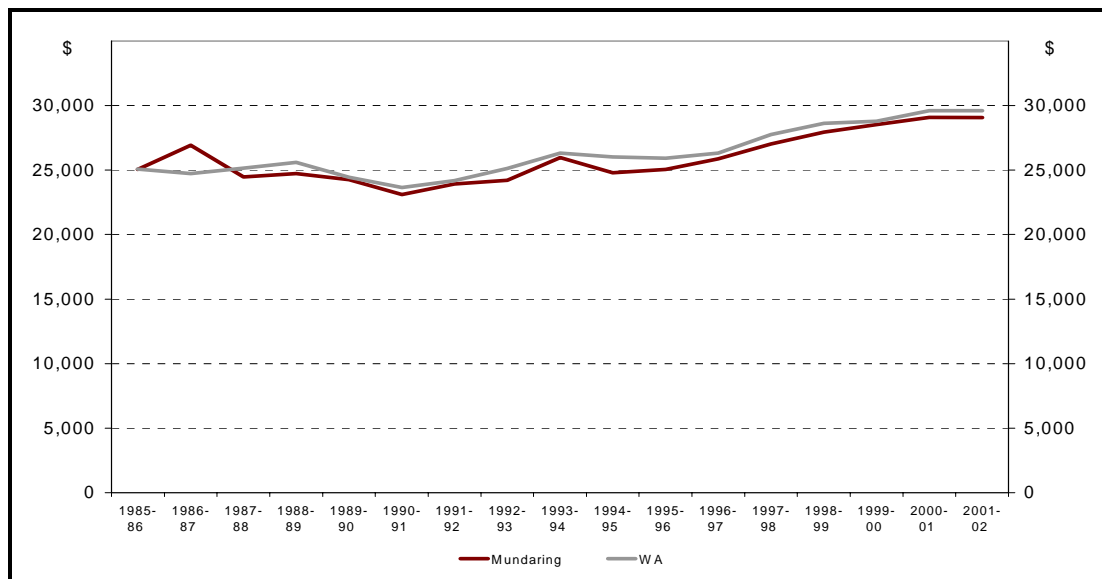
Census data on the distribution of households and individuals by their weekly income is presented in Figure 2.85. The individual and household income distributions for Mundaring are similar to that for the State as a whole. This is confirmed by data from the ATO which indicates that the mean taxable income for Mundaring has moved closely in line with the State average over the past 17 years (see Figure 2.86). In 2001-02, the mean taxable income for Mundaring was only about \$500 less than the State mean taxable income.

Figure 2.85
Income Distribution of Households and Individuals, Mundaring: 2001*



Note: * Proportions have been calculated excluding those who did not state their income and/or only stated partial income.
Source: ABS, 1996 and 2001 Census Basic Community Profiles.

Figure 2.86
Mean Taxable Income, Mundaring: 1985-86 to 2001-02



Source: Australian Taxation Office, Taxation Statistics 1985-86 to 2001-02.

2.11.10 Recreation and Gambling for Post Code Area: Mundaring

Mundaring is effectively an outer suburb of Perth and as such there are a number of recreation and gambling activities in the surrounding region. Within the Mundaring local government area there are a number of recreational facilities including pools/aquatic centre, recreation parks, sporting ovals, tennis courts, and walking trails.

In terms of gambling, greyhound racing, TAB, lotto and scratchies are available in local venues, while the Burswood Casino is within reasonable commuting distance (about 30kms).

APPENDICES

Appendix A

Community Impact of Electronic Gaming Machine Gambling

Discussion Paper 1: Review of Literature and Potential Indicators

Prepared for
Gambling Research Panel (Victoria)

Prepared by
The SA Centre for Economic Studies

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Executive Summary

PLEASE NOTE:

We invite interested readers to respond to this discussion paper by email to michael.oneil@adelaide.edu.au or via facsimile (08) 8232 5307.

The purpose of this discussion paper is to evaluate which community impacts may potentially be correlated with EGM gambling. Once these factors are identified this will provide the items to be compared between the Victorian and Western Australian regions shown in Table 1.1 in the second part of the study.

It is important to note that this literature review is not undertaking a detailed critical analysis of the studies reported. Consequently, at this stage, the researchers are not claiming that any one of the factors so far identified is definitely correlated with EGM gambling, but rather that one or more existing studies have found evidence of such a link, and consequently this is a factor worth investigating further in this project.

It is considered methodologically incorrect to simply test for statistical associations between variables. Instead, statistical analysis should be used to test hypotheses, where there is a clear understanding of why a relationship may exist between two variables and what the nature of that relationship is believed to be. For that reason, in determining the way in which regions in Victoria would be compared to those in Western Australia, the researchers have sought to identify factors for which there was evidence in the literature of a link (or potential link) between gambling and that form of social/community impact. Accordingly, at this time we have focussed on identifying and testing individual factors, rather than comparing the regions on generalised measures of "social capital".

A1. Introduction

The original version of this discussion paper included a brief introduction and background to the study, it provided an overview of the scope of the research and summarised the project outcomes. Because these areas are outlined in Section 1 of this report we have deleted these sections in this Appendix.

This document lists the areas matched for comparison across the two States, briefly outlines several methodological considerations and then draws together the literature review, the assessment of potential data sources and comments by stakeholders and feedback received from interested researchers.

Table A1.1 details the areas matched for comparison between Victoria and Western Australia.

Table A1.1
Matched Comparison Regions: Victoria, Western Australia

	Victorian Regions:	Matched with Western Australian Regions:
Metropolitan LGAs:	City of Wyndham City of Maribyrnong	City of Cockburn City of Belmont
Non-Metropolitan LGAs:	City of Greater Shepparton City of Warrnambool	City of Albany City of Geraldton
Postcode Areas:	3875, Bairnsdale (East Gippsland Shire) 3915, Hastings (Mornington Peninsula Shire) 3799, Warburton (Yarra Ranges Shire)	6280, Busselton (Shire of Busselton) 6167, Kwinana (Town of Kwinana) 6073, Mundaring (Mundaring Shire)

Source: SACES listing of regions.

A1.1 Discussion Paper 1: Review of Literature and Potential Indicators

The purpose of this discussion paper is to evaluate which community impacts may potentially be correlated with EGM gambling. Once these factors are identified this will provide the items to be compared between the Victorian and Western Australian regions in the second part of the study.

It is important to note that this literature review is not undertaking a detailed critical analysis of the studies reported. Consequently, at this stage, the researchers are not claiming that any one of these factors is definitely correlated with EGM gambling, but rather that one or more existing studies have found evidence of such a link, and consequently this is a factor worth investigating further in this project.

Once the factors of interest are identified, the researchers will then review other factors that appear to be correlated with each potential impact (where such information is available). The identification of other factors correlated with the social impacts to be

examined is important as it suggest what factors will need to be controlled for in the statistical comparisons of the regions in this study. Finally, the report reviews the available Australian data to assess whether suitable data exists to test for effects on the social impacts of interest.

In adopting a broad approach to the statistical analysis to be undertaken in this study, the researchers have been careful to use a conceptually solid methodology. Due to the limitations of statistical analysis (as compared with controlled experimental research) it is considered methodologically incorrect to simply test for statistical associations between variables. Instead, statistical analysis should be used to test hypotheses, where there is a clear understanding of why a relationship may exist between two variables and what the nature of that relationship is believed to be (Gujariti, 1995, p. 20-1). For that reason, in determining the way in which regions in Victoria would be compared to those in Western Australia, the researchers have sought to identify factors for which there was evidence in the literature of a link (or potential link) between gambling and that form of social/community impact. Accordingly, at this time we have focussed on identifying and testing individual factors, rather than comparing the regions on generalised measures of "social capital", such as those outlined in "Measuring Victoria's Progress: A System of Social Benchmarks and Indicators for Victoria, Report" (prepared by Swinburne University for the Victorian Department of Premier and Cabinet).

It is also worth reinforcing the understanding that any relationships identified through statistical analysis are statistical, not deterministic.

A1.2 Methodological Considerations

To assist the researchers identify and consider potential economic and social impacts of EGM gambling on local communities, each of the Councils and postcode areas were sent a letter informing them of the study and inviting the Councils to nominate a contact person to assist with the study. Western Australian government agencies and others⁶ were informed of the study by letter and invited to participate. TABCORP and Tattersall's in Victoria were informed of the study and invited to contribute. Some 44 community organisations including Gamblers' Help, BreakEven Counsellors, Gambler's Helpline and other researchers were contacted by letter.⁷

The researchers stated:

"A critical factor (in the study) is the identification of the community impacts to be studied. Whilst we are conducting an extensive review of the available academic literature on this subject (and we welcome your suggestions of any relevant reference material), we are particularly interested in the views of the community sector, helping agencies and other academics. We would appreciate any feedback you feel able to provide, based on your experience, to the following questions:

- what in your view are the principal economic and social impacts of EGMs on regional economies, communities, families and individuals (positive and negative);

⁶ Department of Premier and Cabinet, Department for Community Development, Department of Racing, Gaming and Liquor, LotteryWest.

⁷ See Appendix 1: Copy of Letter sent to Community agencies, industry and others.

- what negative social impacts are associated with problem gambling using EGMs;
- what are the possible positive social impacts on regions;
- what other factors may be causing these negative social impacts?; and
- what indicators might exist for these positive and negative social impacts?"

We received a number of helpful responses from Local Government, the Victorian Local Government Association, Gambler's Help in Victoria and Western Australia, Tattersall's, BreakEven Groups in South Australia, the Salvation Army, Australian Institute of Criminology and a range of community associations.

A2. Social/Community Impacts of Gambling

A2.1 Electronic Gaming Machines

Since Electronic Gaming Machines⁸ (EGMs) were first legalised in Australia in 1956 (for use in NSW clubs), they have spread to all States and Territories, with only Western Australia severely restricting access to machines by licensing their use solely to the Burswood Casino. The expansion of electronic gaming machines outside of casinos predominantly occurred in the 1990s, with enabling legislation passed in Queensland and Victoria in 1991, in SA in 1993, in the NT in 1996, and in Tasmania in 1997 (AIGR, 1999). In all States and Territories other than Western Australia, both licensed clubs and hotels are permitted to install EGMs, although there are some restrictions on their availability to venues such as a cap on the total number of machines available in the State (Vic), a freeze on new applications being processed (SA), and a requirement for a regional impact study to be conducted prior to machines being moved into a venue (Vic). Licensed clubs often receive preferential treatment in terms of types of machines available (in the ACT), numbers of machines per venue (for example in NSW and Qld) and/or lower tax rates payable on EGM revenue.

Table A2.1 shows the distribution of EGMs by State/Territory and between different types of venues. In 1999-2000 and 2000-01, gaming machines accounted for around 58 per cent of all gambling expenditure in Australia (Tasmanian Gaming Commission).

By 2001-02 expenditure on EGM gambling (excluding EGMs located in casinos) had increased to \$8.92 billion or 59.4 per cent of all gambling expenditure (Tasmanian Gaming Commission, 2003). A 1994 Queensland survey of 500 people from the general population found that 40 per cent had played a machine in the last year. Contrary to popular opinion, they reported that the "typical" electronic gaming machine player was a young man that was employed (Dickerson, et. al., 1995, p. 441).

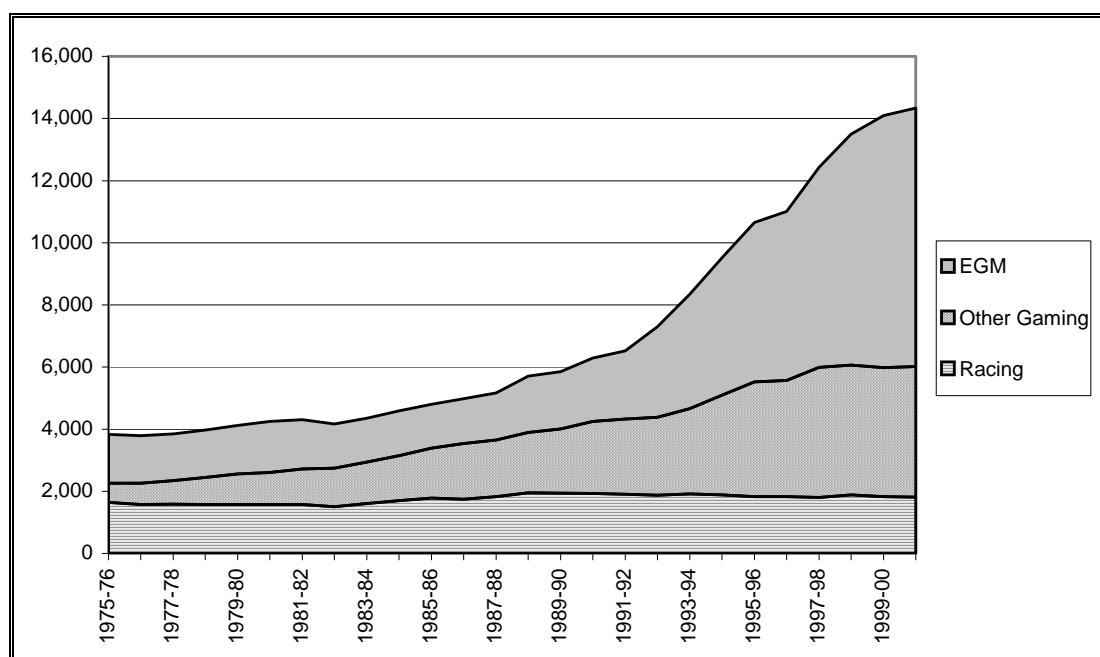
⁸ Electronic Gaming Machines (EGMs) tend to be referred to as 'poker machines' or 'pokies' in Australia, 'slot machines' in America, 'video lottery terminals' in Canada and 'fruit machines' in the UK.

Table A2.1
Numbers of Electronic Gaming Machines 1999-2000

	Casinos	Hotels	Clubs	Total
New South Wales	1,500	25,452	74,710	101,662
Victoria	2,500	13714	13730	29,944
Queensland	3,238	16492	19235	38,965
Western Australia	1,318	Prohibited	Prohibited	1,318
South Australia	824	12774	1641	15,239
Tasmania	1,153	1606	231	2,990
ACT	Prohibited	60	4939	4,999
Northern Territory	610	221	604	1,435
Australia	11,143	70,319	115,090	196,552

Source: Tasmanian Gaming Commission.

Figure A2.1
Australian Real Gambling Expenditure, 1975-76 to 2000-01
 Stacked Graph (\$'000)



Source: Tasmanian Gaming Commission

Figure A2.1 illustrates the extent to which real expenditure on electronic gaming machines has increased sharply since the early 1990s when access was substantially liberalised, whereas other gaming expenditure increased only moderately over this period, and racing related wagering expenditure declined.

A2.2 Problem Gambling and Electronic Gaming Machines

What is Problem Gambling?

Most of the literature on the negative socio-economic impacts of gambling concentrates on those impacts related to problem gamblers, as for non-problem gamblers electronic

gaming machine expenditure is a “normal” form of spending. In the literature, the terms ‘compulsive’, ‘pathological’, ‘disordered’, ‘excessive’ and ‘problem’ gambling have often been used interchangeably, to describe someone who exhibits an emotional dependence on gambling and impaired control over such behaviour. The term ‘problem gambling’ is now more generally accepted because it is more neutral and it avoids any implication that there is an underlying disease model to explain the gambling behaviour (Blaszczynski, Walker, Sagris & Dickerson, 1997). In the broadest terms, problem gambling can be defined as any pattern of gambling behaviour that negatively impacts on other areas of an individual’s life (Volberg, Moore, Christiansen, Cummings and Banks, 1998).

Similarly, the Australian Institute of Gambling Research (in a report prepared for the Victorian Casino and Gaming Authority) has recommended the following definition of problem gambling:

‘Problem gambling’ refers to the situation when a person’s gambling activity gives rise to harm to the individual player, and/or to his or her family, and may extend into the community. (*Australian Institute of Gambling Research, 1997. P2*).

This definition is particularly useful from a public policy perspective as it stresses the presence of harm rather than a list of diagnostic criteria. It also places the individual’s gambling problems in a broader context and avoids academic arguments about the causes of problem gambling.

Perhaps the best current explanation of the nature of problem gambling at the individual level is set out in Blaszczynski (2000). Unlike other researchers who assume that gamblers are a homogenous population, Blaszczynski identifies three subgroups of problem gamblers: the group of “normal” problem gamblers who do not have pre-existing psychopathology, the emotionally vulnerable group and the pathological group with biologically based impulses. Blaszczynski (2000) believes that his model integrates biological, personality, developmental, cognitive, learning theory, and environmental factors. All three groups are exposed to common influences such as:

- public policy that promotes availability and access to gambling facilities;
- the conditioning effects of the gambling environment that are so resistant to extinction and can result in an habitual pattern of gambling which can be described as an ‘addiction’; and
- irrational cognitive structures which lead gamblers to the erroneous belief that they can recoup their losses through further gambling, even though they know that gambling led them into financial problems in the first place.

Whilst “*normal*” *problem gamblers* (who do not have pre-existing psychopathology) may be preoccupied with gambling, chase losses and suffer from depression and anxiety, these responses are seen as *results* of the financial pressures caused by gambling losses, not as the *cause* of excessive gambling. These individuals are placed at the lower end of the problem gambling scale and they are more motivated to seek treatment and achieve controlled levels of gambling.

The vulnerable group of gamblers' participation in gambling, however, is motivated by a need to relieve emotional states or deal with psychological needs. This group is characterised by a predisposing psychological vulnerability. They may have a history of negative developmental experiences, neurotic personality traits, adverse life events or a family history of pathological gambling. This sub-group of gamblers has a higher level of pre-existing psychopathology such as depression, anxiety, substance dependence and an inability to cope with external stress. They may see gambling as a way of achieving emotional escape through dissociation. In therapy, this group may be considered too fragile to maintain controlled gambling, and abstinence may be the goal.

The final group, those with *biologically based impulses* may have a neurological or neurochemical dysfunction reflected in impulsivity and attention deficit features, and it is likely that these traits predate the onset of pathological gambling. Genetic studies have reported that pathological gamblers are more likely than controls to have the D2A1 allele for the dopamine D2 receptor gene. It is argued that these gamblers have a biologically based impulsivity, they are unable to delay gratification and they have a diminished response to punishment. Consequently, this type of gambler fails to modify their behaviour even when the consequences of their actions are painful. Gambling in this group may commence at an early age and quickly escalates in intensity and severity. These gamblers are less motivated to seek treatment and respond poorly to any form of intervention.

The strength of the above pathways model is that it integrates a number of factors (genetic, biological, psychological and environmental) that can contribute to the development of problem gambling. At the same time, it takes into account that there are groups of non-disturbed gamblers.

Prevalence of Problem Gambling

About 80 per cent of adults in Australia have gambled at some stage in their lives. The overwhelming majority gamble responsibly and experience no problems as a result of this form of entertainment. Nevertheless, a significant number do experience problems. The Productivity Commission (1999) estimated that problem gamblers are approximately 2.1 per cent of the population, or 293,000 people. It should be noted that this is the current, not lifetime, prevalence and reflects the number of persons experiencing problems in the last 12 months. The Queensland Household Gambling Survey (2002), which surveyed residents of Brisbane, estimated that 0.83 per cent of the population was in the problem gambling group while another 2.7 per cent was classified as in the moderate risk gambling group. These two survey results are not strictly comparable as they used different measures of problem gambling. The Queensland survey used the Canadian Problem Gambling Index (CPGI) that has an emphasis on indicators of social context.

Shaffer et al (1997) completed a meta-analysis of studies of the prevalence of disordered gambling in the USA and Canada and concluded that the past year prevalence for Level 3 gambling (a pattern of disordered gambling that satisfies "diagnostic" criteria) is between 0.90 per cent and 1.38 per cent. The past year prevalence for level 2 gambling (a pattern of gambling that is associated with a wide range of adverse reactions or consequences) was estimated to be between 1.95 per cent and 3.65 per cent.

Researchers utilise several methods to assess problem gambling. The South Oaks Gambling Screen (SOGS) uses questions about a gambler's behaviour and feelings about gambling to test for gambling problems. Its emphasis is on the financial aspects of gambling. DSM-IV, the other commonly used screen is a diagnostic tool with a set of clinical criteria that has a greater focus on the psychological aspects of problem gambling. It is important to remember that problem gambling lies on a continuum of gambling behaviour. The differing terminology and tools is indicative of the US using a much more "illness" based approach compared to Australia.

The Productivity Commission (1999) used a variant of SOGS that focussed on behaviour in the last 12 months. They categorised people with SOGS5+ as having moderate problems that warrant policy concern. Respondents with SOGS10+ were categorised as being severe problem gamblers. SOGS was also supplemented with self-assessment questions and other indications of harm. Pathological gambling, used in many US studies, is defined as fitting five or more of the ten DSM-IV criteria (National Gambling Impact Study Commission, 1999). Furthermore, gamblers who fit three or four of the DSM-IV criteria are termed problem gamblers. There is some evidence to suggest that pathological gamblers and problem gamblers from DSM-IV are comparable to the classification used in many Australian studies of severe and moderate problem gamblers.

Electronic Gaming Machines and Problem Gambling

In terms of problem gambling, and consequently community impacts, electronic gaming machines have been identified by many community groups and state governments as being of particular concern, because they represent such a large share of all gambling and because they are perceived to be linked to the development of a range of social problems. The Productivity Commission noted a more robust relationship between problem gambling and numbers of EGMs than for other indicators of gambling availability, and this remains persuasive notwithstanding later criticisms.⁹

These perceptions appear to be mirrored internationally. The New Zealand Department of Internal Affairs found that gamblers with serious problems were likely to prefer more continuous types of gambling, such as, EGMs, casino games and racing. The Responsible Gambling Bill before the New Zealand Parliament classifies electronic machine gaming as class 4 gambling (the highest class, casinos, are regulated separately) warranting strong restrictions on the number of machines per venue (just 9 machines for venues licensed after 17 October 2001). The United Kingdom Home Office distinguishes 'hard' from 'soft' forms of gambling largely upon the ability to bet more frequently, identifying EGM usage in the former category.

In this context, it is worth recalling that the Productivity Commission found that problem gambling was higher among gaming machine gamblers compared to gamblers who favoured other forms of gambling. This finding is consistently confirmed by other

⁹ Mizerski et al (2001) have disputed the special relationship between problem gambling and EGMs, using the Productivity Commission (1999) survey data to argue that the distribution of machine gaming among consumers is not dissimilar to the pattern associated with most consumer goods and other forms of gambling. There are significant methodological problems to be found in the paper, and hence, the conclusions contained in the paper should be discounted.

survey data, and independent research; it is supported by client registration data maintained by gambling counselling agencies in all States; and is associated with the preferred form of gambling nominated by gamblers themselves.

The fact is, that gaming machines are played by much larger numbers of people; they represent a continuous form of gambling whereas other forms of gambling are restricted to weekly or several times a week, while gambling at a casino is less accessible to much of the population.

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

- that nationally, 2.1 per cent of the adult population is estimated to have a significant problem with gambling;
- 1 per cent have severe gambling problems; while
- 1.15 per cent have moderate gambling problems.¹⁰

Equally significantly, but far less commonly cited are the following electronic gaming machine specific estimates derived from the Productivity Commission's survey:

- 4.7 per cent of *all* gaming machine gamblers are problem gamblers;
- 22.6 per cent of *weekly* electronic gaming machine gamblers are problem gamblers;
- 42.3 per cent of net gaming machine revenue comes from gambling by problem gamblers;
- those States with high concentrations of gaming machines have high problem gambling prevalence rates (New South Wales 2.55 per cent, Victoria 2.14 per cent); and
- those States with no gaming machines or limited gaming activity had lower problem gambling prevalence rates (Western Australia 0.7 per cent, Tasmania 0.44 per cent).

Why is There a Relationship Between EGMs and Problem Gambling

Problem gambling is likely to involve a higher number of people who participate in EGM gambling for both sociological and psychological reasons. Electronic gaming machines in hotels/clubs are a form of gambling that is highly accessible, and consequently it enjoys high participation rates. Given that an individual cannot become a problem gambler without having gambled, it would seem reasonable to assume that forms of gambling with high participation would be related to high numbers of problem gamblers.

From a psychological/psychiatric perspective there are several factors related to the structure and operation of EGMs that may lead to a higher proportion of participants becoming problem gamblers than with other forms of gambling.¹¹

¹⁰ It is important to note that these are current, not lifetime prevalence rates.

¹¹ This discussion draws on an outline of the psychological understanding of problem gambling prepared by SACES for an earlier as yet unpublished report for the GRP 'Study of the Impact of Caps on Electronic Gaming Machines, Preliminary Report 1'. This report will be available in mid-2004.

The psychological literature recognises that, even when gamblers are losing money, their behaviour is not extinguished because the gambling response is maintained by one of the most powerful reinforcement schedules: that of intermittent reinforcement. Playing electronic gaming machines is a prime example of intermittent reinforcement. EGMs operate on a variable ratio schedule with a winning payout (the reinforcer) being presented after a variable number of unsuccessful bets (non-reinforced responses). Elimination of this gambling behaviour is difficult because the response operates on an intermittent schedule. Laboratory studies have shown that variable interval and variable ratio schedules are superior to fixed schedules in maintaining behaviour (Skinner, 1953).

Another hypothesis that may help to explain why electronic gaming machines are so attractive, is one that suggests that these machines employ multi-sensory techniques that are very effective no matter what the gambler's preferred sensory modality is. They combine visual cues (colour, graphics, lights), auditory cues (sounds and music), as well as kinaesthetic cues (through pushing the button). The literature from such fields as learning theory and cognitive psychology research suggests that the use of multi-sensory cues is a very powerful learning technique that engages the learner (Williams 1986). Blaszczynski et al. (2001) points out that, as yet, there has been little research into the effects of graphics, colour and sound effects. However, he commented that authors have noted the use of primary colours and flashing lights as a way of increasing the impression of fun and excitement, and that:

“... it is a well-known phenomenon that players enjoy new machines, presumably because they offer visual and sound effects that increase the enjoyment of the machines ...” (Blaszczynski et al. 2001. P. 39).

There is also evidence that cognitive errors play a part in the development of problem gambling, and that EGM players may be more susceptible to these errors than other gamblers. Although it is generally acknowledged that electronic gaming machine playing involves no skill¹² and leads to an inevitable loss of money, research suggests that many heavy EGM players privately believe that their special knowledge of machines will provide a winning edge, and that machines can be influenced to make payouts more probable (Walker, 1992).

Walker, (1992) reported extensive anecdotal evidence suggesting that irrational thinking may be very common among slot machine gamblers. This includes players trying a range of machines for short periods to find one that is “paying”. Some players talk to their machines and most players become very possessive about ‘their’ machine, to the point where they zealously guard it while they change money. This type of behaviour suggests that few of these players believe that one machine is as good as the next. (Walker, 1992).

One method of studying the cognitions of gamblers while they play is the ‘thinking aloud’ method. In such studies, the player is required to say aloud what he/she is thinking while playing. Walker (1992) cites such studies where the results revealed a number of irrational thoughts and a suggestion that most cognition associated with gambling on slot machines are irrational. In these studies it was found that:

¹² Some games which require player interaction during the play, such as blackjack and draw poker, do contain an element of skill, though perfect play will still result in financial loss in the long-run.

- gamblers whose preferred style of gambling was the slot machine exhibited higher levels of irrational thinking than other groups;
- slot machines induced more irrational thinking in all players than other games; and
- when slot machine players were playing their preferred machine, the level of irrational thinking was higher than anticipated.

Another such erroneous belief is commonly known as the 'gambler's fallacy'. Many individuals have faulty conceptions of randomisation. In a random sequence of events each event is independent of all events preceding it. However, many gamblers seem to behave as if random events have an internal logic. This is perhaps due to a lack of experience with truly random sequences in everyday life – though the weather is highly variable, knowledge of today's weather provides some information with which to estimate tomorrow's weather.

The "gambler's fallacy" refers to the erroneous belief that in games of pure chance (eg electronic gaming machines) the probability of future events is affected by the history of the game. So, for example, people think that a machine that has not paid out for a while must be ready to pay out very soon, while a machine that has just paid out is not likely to do so again for a while. Gamblers who do not understand that events in gambling are independent, can be led to believe that a "near miss" indicates that the machine "must be due to pay out soon". This lack of understanding creates difficulties for people with a gambling problem because they believe that they can recover past losses by playing the machine a bit longer.

A2.3 Negative Social Impacts of Gambling

Many of the "harms" associated with problem gambling related to the level of expenditure with average net gaming expenditure for problem gamblers estimated to be \$12,220 while other gamblers' losses are less than \$650. The evidence consistently suggests that electronic gaming machines are more heavily related to problem gambling than other forms of gambling, with problem gamblers estimated as accounting for 43 per cent of electronic gaming machines expenditure (Productivity Commission, 1999). A recent Queensland Government Treasury telephone survey (2002, p. 17) completed 13,082 interviews and noted that gaming machines is a more popular form of gambling in the Moderate Risk and Problem Gambling groups. Breen and Zimmermann (2002) found, in their recent study of gamblers seeking outpatient treatment, that the amount of time for a gambler to deteriorate to pathological gambling was much shorter with electronic gaming machines compared with other forms of gambler, 1.08 years versus 3.58 years.

A significant range of potential harms relating to problem gambling have been identified in the academic literature. These types of harms could be broadly categorised into economic impacts; social/psychological impacts on gamblers themselves; and impacts on others. The following list outlines the broad sources of potential negative impacts:

Economic Impacts:

- financial problems (affecting the gambler themselves, their partner and children and society as a whole through higher potential welfare costs);
- work performance (impacting on the gambler because of an increased likelihood of unemployment, and impacting on the society as a whole because of lower GDP).

Impacts on the gambler:

- health;
- depression; and
- suicide

Impacts on others:

- family breakdown;
- impacts on the children of gamblers;
- violence; and
- crime.

The following discussion considers the available evidence as to the extent of the potential impact of problem gambling on these sources of harm, and the level of harm created. It is important to note in the discussion of these potential harms that this Discussion Paper *is not advancing the results of other studies as 'proof'* that gambling causes these harms. Rather, findings of other studies are being used to identify issues that the research project, of which this literature review forms a component, should investigate further.

In reading these study results it is also worth considering that there are two general limitations to them. Firstly, most studies rely on telephone surveys of the general population or surveys of problem gamblers in various treatment programmes. There are shortcomings with both of these approaches. Telephone surveys of the general population may be underestimating the prevalence of problem gamblers for several reasons, including that: problem gamblers may be less likely to be home due to gambling; are more likely to have the telephone disconnected due to financial difficulties; and are more likely to be in prison or homeless. In contrast, studies of problem gamblers in treatment ensures that the study collects information of problem gamblers, however there is a concern that gamblers in counselling may not be representative of problem gamblers as a whole. Discussions with counsellors working with problem gamblers suggest that gamblers often seek assistance after some 'crisis'. This may mean that the scale of harms for problem gamblers in treatment is greater than for the total population of problem gamblers.

The second potential limitation to many of the studies examined is their inability to control for the issue of co-morbidity. For example, the Mental Health Foundation of Australia (1998), estimates that up to 75 per cent of gamblers seeking help suffer from symptoms of depression (p. 10). However, it is not clear whether these persons exhibit problem gambling behaviour because they are depressed, are depressed because of the consequences of their problem gambling, or whether there is dual causation. It can be

difficult if not impossible to determine the direction of causation. However, in terms of quantifying the impacts of problem gambling it is important to have at least some indication as to the direction and extent of causation. There are a number of psychological factors that are co-morbid with problem gambling. Dickerson et al. (1996) estimated that approximately one fifth of Australian gamblers who sought help for their gambling also suffered from alcohol dependency. Similarly, the AMA Victoria states that the following conditions are associated with problem gambling: alcohol or drug dependence; stress related disorders; irritability and anxiety; a range of personality disorders and attempted suicide.

Financial Problems

Boreham et al (1996) reported the results of a survey conducted in Brisbane in 1994 by the Department of Family Services and Aboriginal and Islander Affairs on the social costs of gambling. The random telephone survey of 500 people in Brisbane found that nearly one quarter of players stated that if they had not spent money on EGMs they would have most likely spent it on household expenses. In contrast, the report found that players were no more likely to experience financial hardship than non-players. The sample of players was only 207, probably insufficient for problem gamblers to be statistically significant. Comparatively, a more recent telephone survey in Brisbane (Queensland Government Treasury, 2002) found that two thirds of problem gamblers report that gambling has caused financial problems for themselves or their families (p. 19).

The Productivity Commission (1999, p. 7.47) estimated that for problem gamblers the mean ratio of net gambling expenditure to household income (affordability) is 22.1 per cent (with a median of 12.2 per cent). They indicate that only 1.4 per cent of problem gamblers report ever being bankrupt due to gambling. Data from the Inspector-General in Bankruptcy reveals that 1.3 per cent of total bankruptcies are related to gambling. It is important to note that declaring bankruptcy due to gambling is illegal, so it likely to be under reported.

Stitt et al. (2001) undertook a study comparing matched casino and non-casino communities in the United States. They found that bankruptcy is influenced by the presence of a casino. They reported that a significant increase in the rate of personal bankruptcy in five out of seven 'casino' communities. There was also a statistically insignificant increase in one of the other communities. It is interesting to note that the community where bankruptcy did not increase was the only one that could qualify as a "destination resort".

The largest single reason given for individuals filing for bankruptcy is unemployment while for businesses it is poor economic decisions.

The Productivity Commission (1999) stated that they were 317 bankruptcies officially due to gambling in the twelve-month period. They estimated that each bankruptcy costs \$4,000 and that therefore, the annual costs can be estimated to be \$1.3 million. The Productivity Commission did not estimate any costs involved with bad debts or any future impact of the community.

Work Performance

There is considerable evidence to suggest that problem gambling may be related to higher absenteeism, lower performance at work and losing jobs. These all have costs for the community. Higher absenteeism and lower performance means that work places are less productive while losing jobs means that employers have to bear the costs of employing someone new and training them.

The National Survey conducted by the Productivity Commission (1999) as part of their study, found that approximately 19 per cent of problem gambler reported losing time from work or study in the last year due to gambling, but this mostly occurred infrequently. Furthermore, about 25 per cent indicated that gambling had an adverse impact on their work.

A survey of clients of counselling agencies also undertaken as part of the Productivity Commission's study (1999) found that 50 per cent of problem gamblers reported that they had lost time from work or study due to gambling in the last year. In addition, approximately 6 per cent of problem gamblers reported that they had moved jobs, and around 0.5 per cent reported that they had been fired due to their gambling. The counselling clients also reported, on average, a 7.9 per cent decline in work performance.

Thompson et al (1996) undertook a survey of the Social Costs of Gambling in Wisconsin and found that 21 per cent of serious problem gamblers had lost or quit their jobs due to gambling. These individuals remained, on average, unemployed for more than one year. More than 60 per cent lost time at work because of gambling. On average, the lost time for all gamblers interviewed was nearly 8 hours per month.

Ladouceur et al (1994) surveyed member of Canadian Gamblers Anonymous. They found that 66 per cent of those surveyed had missed work (or left early) to gamble, with half of these doing so more than five times a month. Furthermore, 59 per cent of those surveyed reported being irritable at work because gambling distracted them and 14 per cent they had missed a day of work to gamble.

The Productivity Commission (1999) estimated that between 7,000 and 49,200 people had lower work productivity due to gambling. They estimated the average loss of productivity amongst these problem gamblers was 7.9 per cent. Using average weekly earnings as the value of productivity, they calculated that the total annual value of lost productivity due to gambling was \$21 million to \$150 million.

The Productivity Commission also estimated the costs of job change. They used the following information: an estimated 5,600 people changed jobs due to gambling in the last twelve months; the expected length of unemployment is 6 weeks for each person; income lost per week is \$743; job search costs for the employee of \$2,357; staff replace costs of \$3,862 (ten per cent of annual average earnings); average benefits of \$1,482 per person in benefits for half the people who changed jobs. This resulted in the estimated annual costs including: costs to gamblers of \$24 million in lost income; \$13 million in job search costs; costs to employers of \$22 million in staff replacement costs; and \$4 million transferred from taxpayers to gamblers. Therefore, the total costs of job changes are \$63 million.

In contrast, Thompson et al (1996) also measured the loss of the problem gambler's contribution to production. *The marginal value of a serious problem gambler's lost labor (contribution to production) due to unemployment because of gambling represents a social cost. This cost is estimated at \$1,398 per serious gambler per year, based on the length of unemployment (annual average) time and average pay in Wisconsin. For the casino problem gamblers, the cost is estimated at \$1,331. (page 19).*

Health

Brown and Coventry (1998) in their study of women gamblers found that 56 per cent of the women reported that gambling negatively affected their health. Negative impacts listed were: depression, stress, anxiety, lethargy, insomnia, poor nutrition, suicidal thoughts, increased caffeine and nicotine consumption, sweats, confusion, panic and ulcers.

A recent study in Delaware undertaken by the Health Services Policy Research Group of the University of Delaware (2002) found that more than a third of problem and pathological gamblers report being in moderate to poor physical or mental ill health, comparatively 14 per cent of low risk gamblers report this same health status.

Dickerson et al (1996) found that, based on a clinical study of problem gamblers, 40 per cent of problem gambler's partners had developed significant stress-related illness.

Depression

Annually, 5.1 per cent of Australians report feeling depressed for a period of two weeks or longer. The Productivity Commission estimates that gambling accounts for approximately 9.0 per cent of these cases. They also found that nearly all problem gamblers seeking help from counselling services report some episodes of depression and approximately 60 per cent indicate that they feel this way often or always. (p. 7.14)

The Mental Health Foundation of Australia (1998) estimates that up to 75 per cent of gamblers seeking help suffer from symptoms of depression. Furthermore, over 22 per cent of this group had also made an actual suicide attempt.

According to the Commonwealth Department of Health and Aged Care (1999), 4.2 per cent of men and 7.4 per cent of women suffer from a depressive disorder in a 12-month period. It is reported that depression occurs most often in females aged 18-24 years and in males aged 35-44 years. The most common social risk factors for depression include: poor intimate relationships; unemployment; exposure to abusive situation and prior exposure to abusive parenting. The most common medical illnesses that precipitate depression includes: diseases of the central nervous system; endocrine disorders; acute and chronic infective diseases; malignancy; and cardiovascular diseases. Furthermore, certain groups in Australian have a higher vulnerability to depression such as: people with a past history of depression; people who experience life stressors, people with a family history of depression; refugees; and, older people who live in nursing homes.

The Productivity Commission's National Gambling survey indicates that 49,400 people often suffer depression, 21,200 always suffer depression due to gambling problems. The numbers were adjusted downwards by 20 per cent to account for uncertainty as to the direction of causality. They assumed that the cost for each person suffering depression were between \$5,000 to \$15,000. Therefore, the estimated range for the annual costs of depression due to gambling was \$231 million to \$692 million. The Productivity Commission noted that depression could involve a range of medical costs that they did not attempt to measure.

Suicide

The Productivity Commission found that around nine per cent of problem gamblers indicate that they have seriously thought about suicide and for problem gamblers in counselling the percentage is much higher at 60 per cent. Approximately 10 per cent of problem gamblers who seek counselling report an attempted suicide.

Blaszczynski and Farrell (1998) analysed 44 case records of suicides occurring between 1990 and 1997 in Victoria in which the State Coroner identified the presence of a gambling problem. They noted that the size of the problem was relatively unknown, as coroners do not always look fully into the causes of suicide. Over the full period, gambling related suicides made up one per cent of the total number of suicides, however from 1994 to 1997 they made up 1.7 per cent. It should be noted that because of the occurrence of co-morbidity these findings are not straightforward, depression was the most frequent co-morbid condition among the suicides. Fourteen of the cases had previously attempted suicide, and for at least seven cases there were two or more attempts.

Stitt et al. (2001) found that there was an increased suicide rate in six of the eight communities studied in the United States. However it was only statistically significant for two of the cases. They also found that a decrease in two communities but only one of these was a statistically significant difference. A regression analysis suggested that the presence of a casino was associated with a statistically significant increase in per capita suicide.

Attempted suicide also imposes costs on the community such as medical care. The Mental Health Foundation of Australia (1998) reports that 22 per cent of problem gamblers that seek help have attempted suicide. They also claim that 61 per cent of problem gamblers think of suicide.

It is important to note that the Mental Health Foundation of Australia makes the point that there is no clear causal relationship between mood disorders and problem gambling. Problem gambling can be caused by a mood disorder or can generate a mood disorder.

The Productivity Commission did not attempt to measure the costs of suicide on the community but noted that it was substantial. They did however, estimate that between 35 and 60 persons committed suicide each year for reasons linked to problem gambling. In estimating the costs of 2,348 attempted suicides, they took into account the other people such as family members who would be affected by this. Firstly, for the problem gamblers the Commission estimated that the cost per attempt would be \$30,000 to

\$50,000. This results in an estimated annual Australia-wide cost of \$70 million to \$117 million. They estimated that the 2.3 immediate family members would be involved and 1.8 parents. They concluded that cost to parents would be between of zero and \$5000 (Australia wide annual costs would be zero to \$21 million) and for immediate family \$15,000 to \$30,000, therefore the Australia wide annual cost being between \$81 million to \$161 million.

A number of demographic variable have been found to correlate with suicide in the general population. These include gender (men are at higher risk than women), marital status (divorce, separated or widowed at most risk), unemployment, alcohol or drug dependence, history of abuse, previous psychiatric problems and threat of a significant financial loss (Motto and Heilbrown 1985).

Family Breakdown

Family breakdown is often cited as a social cost of gambling. From the Productivity Commission's National Gambling Survey it was found that one in ten problem gamblers report a break up with their partner due to gambling. Dickerson, Baxter et al (1995, p. 57) found that 44.4 per cent of male and 22 per cent of female clients of a Queensland counselling group reported relationship break up due to gambling. Thompson et al (1996) in their survey of Gambler's Anonymous members in Wisconsin found that 21.1 per cent of the respondents reported that they were divorced or separated due to their gambling problem.

Stitt et al. (2001) also studied rates of divorce using the same method the authors used for suicide. The results were mixed. In half of the casino communities there was an increase or small decrease of divorce compared to their control communities, in the other half divorce rates actually decreased compared to their control communities. They concluded that no direct relationship between divorce and gambling could be found with their data.

The Productivity Commission estimated that the financial cost of each divorce was \$1,100. Through the National Gambling survey the Commission estimated 2,560 divorces occurred in the twelve-month period due to gambling. This results in an estimated total financial cost of \$2.8 million. The Commission also estimated the value of emotional costs of divorce and separation, finding that 3.3 people were affected by the divorce or separation and with costs at \$15,000 to \$30,000 each. The total emotional annual cost of divorce and separation is estimated at between \$126 million to \$253 million.

Furthermore, the Commission estimated that 57,600 people were adversely affected by a relationship breakdown due to gambling (excluding those involved in divorce or separation). The costs were estimated to be \$5,000 to \$15,000 per person. Therefore, the annual emotional harm from relationship breakdown due to gambling was valued at \$288 million to \$864 million.

Impacts on the Children of Problem Gamblers

The children of problem gamblers are affected in many ways. Darbyshire, Oster and Carrig (2001) interviewed a number of children of problem gamblers and found that loss was a recurring theme. Children of problem gamblers, often lose a parent through divorce or separation and even lose the problem gambling parent as someone they can trust and depend on. The study also found that children lost essentials such as food, with children reporting going to bed hungry. The children also talked of a loss of security.

A study by Jacobs et al. (1989) found that children of problem gamblers demonstrated a greater likelihood of undertaking risky behaviour, such as drinking, taking drugs and smoking than their peers. The children were more likely to report wanting to escape their home situation as the cause than other children. They were also more likely to feel suicidal and had double the risk of committing suicide.

A Maryland study surveyed wives of compulsive gamblers (members of GamAnon) and reported that 61 per cent of their children suffered from mood problems such as withdrawal, anger and depression. They also found other problems including school absences, increased school dropout rates and poorer grades (Lorenz, 1990). The Productivity Commission (1999) concluded that the most pressing problem facing children of problem gamblers was that of poverty and that there is some evidence to suggest that children of problem gamblers are at increased risk of developing gambling problems.

Violence

The Commission also considered anecdotal evidence that links violence and problem gambling. In their Survey of Problem Gamblers in Counselling they found that 13.1 per cent reported violence at some stage during their period of problem gambling. They concluded if this prevalence is applied to people with a SOGS10+ that nationally 6,130 people were involved in violence due to gambling. Given that the average period of problem gambling was 8.9 years they estimated that 551 incidents of violence occurred per year. The cost per incident was estimated at \$5,000 to \$30,000, the total annual cost was \$2.8 million to \$8.3 million.

Crime

In seeking to quantify the costs of crime, the British Home Office (2000) divides the calculation of costs into three divisions:

- costs of the anticipation of crime;
- costs as a consequence of crime; and
- costs in response to crime.

In order to assess the true cost of a particular crime, or of crime associated with a particular factor, the impact on each of these sources of costs needs to be assessed.

The potential link between EGM related problem gambling and crime, and hence the area that we are interested in, comes from problem gamblers engaging in criminal activity in order to fund their gambling (the costs of domestic violence, and other violent crime, related to problem gambling are discussed elsewhere in this review). This focus is important in evaluating existing research, as many of the US based studies focus on the relationship between casinos and crime, where the issues of interest are links with organised crime and money laundering, and the increase in petty theft, etc., that relates to the concentration of a large number of people in one location. These sources of crime appear to have little relevance to hotel and club based EGM gambling, so we will be focussing on the financing of gambling.

The Productivity Commission (1999) notes that once problem gamblers exhaust all their legal means of obtaining money they may turn to illegal means as a last resort. A number of surveys have been undertaken to explore the link between gambling and crime. Jackson et al (2000) undertook an analysis of client information collected by problem gambling counselling services in Victoria between 1 July 1999 and 30 June 2001. The survey of 1,917 new clients who reported electronic gaming machines as their "type of gambling during a typical gambling episode" found that 16.8 per cent self-report as having committed illegal acts to finance their gambling. Furthermore, the Commission's National Gambling Survey (1999), which randomly surveyed 10,600 Australian adults, found that one quarter of severe problem gamblers admitted to having committed a gambling related illegal activity. Ladouceur et al (1994) reported that 37 per cent of the Canadian members of Gamblers Anonymous they surveyed reported stealing from their employee due to gambling.

In contrast to these results, Stitt et al. (2001) concluded there was no conclusive evidence either way regarding the effect of the presence of casinos on crime. *The data indicated that minor crimes are more likely to increase in casino communities than are the index offences, although there is little consistency in types of crimes that significantly change when all the new jurisdictions are compared.* The focus of this study and others in the US context are at least partially monitoring whether street crime has increased in the vicinity of casinos while Australian studies tend to focus on crimes that are the result on the need to finance problem gambling.

Marshall et al (1998) randomly surveyed 103 inmates from the 176 inmates who were "new intakes" in the courts and had been sentenced to an immediate period of imprisonment at Yatala in South Australia; only one inmate approached declined to complete the survey. They found, using SOGS, that 33 per cent of the sample could be classified as problem gamblers (SOGS5+). Interestingly, when looking at the most popular forms of gambling played once a week or more, electronic machines were the most popular with problem gamblers with 64.7 per cent playing them, while 10.1 per cent of non-problem gamblers played them once a week or more.

Furthermore, a recent paper from the Australian Institute of Criminology (2003) indicates that there is **convincing** evidence that a proportion of problem gamblers commit financial crime. Financial crime includes fraud and embezzlement. They concluded problem gamblers are at a high risk of committing crimes to finance gambling. Financial crime of problem gambling is often under reported as it usually

involves family or friends. The Institute¹³ observed that gambling behaviour can escalate to the point at which it culminates in the commission of illegal conduct. In other words, the commission of illegal conduct is a last resort. There have been a number of significant thefts from employers covered in Australian newspapers in recent years, the most recent involving an employee of the CBA in Western Australia allegedly embezzling \$19.5 million from his employer.

The Productivity Commission (1999) estimated 6,300 people were involved in a police incident due to problem gambling and that each incident cost \$150. Therefore, the cost of police incidents due to problem gambling was \$3.2 million per year. In terms of court cases the Commission estimated that the annual number of gambling related cases was 700 and each one cost \$8,000, a total annual cost of \$5.6 million. Lastly, in terms of the cost of jail sentences it was estimated that 363 people received a jail sentence due to problem gambling related crime per year. The average sentence was 3.4 months, giving an estimated annual cost of prison terms relating to problem gambling of \$5.1 million. The Commission clearly concentrates on the costs in response to crime. These estimates would seem rather conservative, as the other costs are not explored such as the costs imposed on the victims of crime and even the costs on the perpetrator's family.

A2.4 Positive Social Impacts of EGM Gambling

The most significant positive impact from the liberalisation of gambling opportunities is that it enables people to participate in a recreational activity that they obviously prefer to those available previously (given that expenditure has been switched into EGM gambling from other uses). The increased satisfaction (called 'utility' by economists) resulting from the wider range of choices is measured by consumer surplus — a measure of how much more a consumer would have been willing to have paid for the good or service they received (in the case of EGM gambling the service received is the enjoyment of spending time gambling, and the chance to win money). Underlying this concept is the belief that individuals are the best judges of how to use their resources to maximise their satisfaction. This expenditure switching is by no means trivial in terms of its scale, with the Productivity Commission in 1999 estimating that the national 1997-98 EGM expenditure of \$6.4 billion provided utility benefits of \$1.4 to 2.3 billion (the wide range of the estimate is due to uncertainty regarding the extent to which gamblers change their behaviour in response to a change in price).

There are two important qualifications regarding the use of consumer surplus. Firstly, it is important to remember that it is a measure of satisfaction, not of value added or employment, indeed it is quite conceivable that utility can rise whilst GDP falls. Secondly, it is important to only include voluntary expenditure in the calculation of consumer surplus. Consequently expenditure resulting from problem gambling should be excluded. Consumer surplus by its nature is a highly individual form of benefit, and as the terms of reference of this study are to examine the Community Impacts of EGM gambling, we will not be including consumer surplus benefits in our comparison of Victoria and Western Australia.

¹³ Private correspondence to the Centre from the Australian Institute of Criminology (2003).

There are a number of positive socio-economic impacts that are discussed anecdotally but we have been unable to find evidence of any quantitative research to substantiate these claims. Firstly, it has been claimed that electronic gaming machines have a positive impact on communities by making hotels more women friendly environments. Brown and Coventry (1997) in their study of women gamblers reported electronic gaming machine venues were considered women friendly for several reasons. These included: that venues were relatively free of sexual harassment compared to other entertainment options, free afternoon teas and women felt comfortable going their alone. Secondly, playing electronic gaming machines may be a way of non-English speakers to feel part of the wider community.

Another piece of anecdotal evidence suggested that the introduction of poker machines in licensed premise actually encouraged more responsible practices for serving alcohol, which lead to a decrease in the abusive consumption of alcohol and its related problems (Collins and Lapsley, 2003, p.142).

A3. Feedback from Stakeholders

A3.1 Feedback from Community Organisations

To add further insights into the literature review, the researchers sought comments from community organisations, local councils, helping agencies, Gambler's Help counsellors and other researchers about those factors that may reflect community impacts. The researchers wrote directly to organisations and invited a response. In addition we are continuing to consult widely by arranging several face to face meetings, conducting telephone interviews and via email correspondence. Meeting were also held with several interested researchers. Those organisations with equivalent programs or responsibilities in the two States were asked to review possible administrative data able to be compared across the two jurisdictions. A range of possible factors/indicators to assess community impacts were discussed in this manner.

As with the review of literature, the inclusion of these factors *should not be taken* as indicating that the Centre believes that there is conclusive evidence linking these potential harms to EGM gambling. Rather, it is thought that as the organisations/individuals providing feedback have extensive experience working with those harmed by problem gambling, the issues cited by them are areas which warrant further investigation. It is worth noting that the types of individuals/organisations providing feedback in this context are often called to provide evidence regarding community impacts in hearings before the VCGA regarding applications for new EGM venues in Victoria. To the extent that it was possible, the feedback from community organisation has been sorted under headings relating to the types of community impacts identified in the literature. The feedback received meant that it was necessary to include two additional categories beyond those resulting from the review of literature: social capital impacts and economic impacts. Unless otherwise indicated, a type of impact was only mentioned in one of the responses received.

Financial Problems

In the range of responses received from community organisations regarding the community impacts of EGM gambling, the most common types of impacts raised were financial. This is not surprising, as the primary mechanism by which problem gambling causes harm is excessive expenditure. The three most commonly raised negative financial impacts of EGM related problem gambling (each of which was mentioned by six organisations) were: significant levels of personal debt; reductions in savings and sales of assets; and the loss of housing and homelessness. Also commonly raised were that households containing problem gamblers were unable to meet the basic costs of living (5 respondents); and increased levels of bankruptcies (4 respondents). Other negative financial impacts raised were:

- increased demand for emergency relief (3 respondents);
- loss of access to utilities (2 respondents);
- reduction in standard of living;
- decreased spending on maintenance of houses/cars; and
- an increase in money lending/pawnbroking (2 respondents).

Workplace Performance

A few respondents raised impacts on work performance as a community cost of EGM gambling. The types of impacts raised were:

- unstable employment/loss of job (3 respondents);
- poor job performance; and
- absenteeism.

Health

Most of the responses received raised at least one type of negative health impact as a consequence of EGM gambling, however the types of impacts identified were varied. The impacts identified were:

- health problems (3 respondents);
- mood instability;
- stress/anxiety (3 respondents);
- reduced self esteem/sense of self worth (2 respondents);
- increased use of mental health services;
- reduced attention spans;
- increased alcohol consumption (2 respondents); and
- increased smoking.

Depression

Depression was raised as a negative impact of problem gambling related to electronic gaming machines by six of the nine respondents.

Suicide

Four of the community organisations identified increased levels of suicide as a negative impact of problem gambling. Two of these organisations also made a specific link with levels of suicide attempts.

Family Breakdown

The impact of problem gambling on family breakdown, and particularly on separation and divorce, was the most common negative impact identified. Other negative impacts cited were arguments in families; and less time spent with families (4 responses).

Effects on Children

The two most commonly raised impacts on children was missing out on recreational activities/holidays; and an increase in child neglect (to be measured through the levels of child protection interventions). One respondent also identified loss of self-esteem/self-confidence amongst the children of problem gamblers. Several counselling agencies noted that they are increasingly assisting children of problem gamblers.¹⁴

Feminisation of Gambling

There is a growing literature (Ming and Breen (2001), Volberg (2003), Hraba (1996)) examining the feminisation of gambling, principally related to the accessibility of EGMs but also in relation to online gambling. Gender based studies into problem gambling have contributed new insights into the relationship between gender and types of gambling. Our particular interest in this research is on the impact on family breakdown, on children of problem gamblers, and crime.

One respondent specialising in offender rehabilitation suggested that EGMs had contributed to an increase in crime and incarceration rates for women.

Violence

The impact of problem gambling on domestic violence was raised in three of the responses received.

Crime

Increase in crime, particularly theft from employers/family members, were identified as a negative community impact of EGM gambling by respondents.

¹⁴ See Oakleigh Monash Leader, "Forgotten Victims of Gambling", 1 September 2003, p. 12.

Social Capital Impacts

A significant number of negative impacts on social capital resulting from EGM related problem gambler were raised by respondents, although there was comparatively little consistency as to the impacts raised. 'Isolation' was the most commonly raised negative social capital impact of problem gambling (4 responses). 'Lack of social variety', and 'breakdowns in relationships with friends' were each raised by two respondents. The following impacts were each raised by one organisation:

- breakdown of the social fabric;
- reduced live entertainment in venues;
- the solitary nature of playing EGMs;
- less community involvement/volunteerism; and
- the lack of alternative entertainment facilities in new suburbs.

Economic Impacts

A number of economic changes were identified as negative local community impacts from EGM gambling:

- closures of (and job losses in) non-gambling businesses (2 responses);
- decreased retail sales; and
- reduced investment in non-gambling businesses, leading to a lack of job opportunities.

Positive Impacts

As would be expected given that the community organisations responding dealt directly with or had some indirect association those experiencing significant problems as a result of EGM gambling, relatively few of the responses included positive community impacts. Those identified were:

- women empowered to go out alone; and
- competition amongst publicans.

Two community organisations also identified positive economic impacts:

- investment and improvement in particularly hotel facilities; and
- attraction of tourists.

A3.2 Feedback from Gaming Industry

Feedback was sought from selected key industry participants, with responses received from Tattersall's (in writing) and from Mr Ross Ferrar of the Australian Gaming Machine Manufacturers Association.¹⁵

¹⁵ Interview and general discussion with Mr Steve Whetton from the Centre for Economic Studies.

The response from Tattersall's, in terms of providing feedback as to the community impacts of EGM gambling suggested that the researchers refer to the study undertaken by ACIL in Ballarat (2001). The researchers had already reviewed this study, but it will be assessed here. In terms of ACIL's calculation of the economic impact of EGM gambling, significant flaws in their methodology were identified by Banks (2002, p. 7), namely their failure to discount expenditure by problem gamblers and the use of a constant price elasticity of demand. When the Productivity Commission recalculated the ACIL estimates for Ballarat, using the assumptions as in the Productivity Commission report on Gambling, the net economic impact of EGM gambling on Ballarat was in the range of minus \$19 million to plus \$8 million and not \$98-\$277 million as reported by ACIL (*Ibid*, p. 8).

In terms of social impacts, the ACIL study produced an interesting finding on the social impact of EGM gambling, namely that 82.5 per cent of adults in Ballarat had visited a licensed club or hotel at least once in the previous year (2001, p. 29). Unfortunately, although the sample was large (1,000 respondents) and the results are therefore likely to be statistically robust, no inferences can be drawn as to whether or not this high usage of facilities with EGMs has any relationship with EGMs themselves. This is because no similar survey was undertaken prior to EGMs becoming available in Ballarat, nor were any questions asked about historical behaviour. Consequently it is not possible to determine whether the extent to which adults visit licensed clubs or hotels in Ballarat has increased, decreased, or remained constant since the introduction of EGM gambling. Their participation findings do, however, suggest that recreational usage is an area of potential impact that is worth investigating.

In the discussion with Mr Ferrar, whilst he was unfortunately not aware of any academic research on the benefits of EGM gambling, he was able to provide anecdotal feedback on the types of community benefits the industry regards as resulting from it. In particular, he identified a range of what an economist would classify as 'social capital' impacts that result from gaming machines being available in hotels and clubs. He believed that the benefits of EGM gambling could be broadly grouped into three types:

- economic (both in terms of investment and employment, and in terms of community surplus, resulting from access to a preferred recreational opportunity);
- social benefits; and
- recreational.

In terms of the social and recreational impacts, he raised a number of general benefits that flowed from EGM gambling in both hotels and clubs. He believed that a significant community benefit of EGM gambling was an improvement in the quality and breadth of accessibility of local recreational venues in regions. Prior to EGM gambling, many women and older persons (i.e. 55+) did not necessarily feel comfortable visiting a local hotel or club, however the expansion of EGM gambling allowed owners to improve the quality of many venues, and increased the acceptability of hotels and clubs as a recreational option. He also believes that the improvement in standards and changes in clientele resulting from EGM gambling has reduced the extent of alcohol related violence in venues.

Mr Ferrar was also keen to highlight the extent to which clubs, because of the financial resources they have access to from EGM gambling, were able to permeate the communities in which they are located. The types of benefits resulting from this were support for 'ancillary' clubs (both financial and through access to facilities) allowing people to explore areas of mutual interest, support for local sporting clubs (once again through both direct financial support and through providing access to facilities), and the availability of high quality recreational facilities in an area, providing locals with a greater range of recreational opportunities, and increasing the scope for community interaction.

A4. Data Items Measuring Community Impact

Having identified potential types of community impacts of electronic gaming machine gambling, both from the available literature and from feedback from stakeholders, the next stage is to investigate whether data exists that would allow these hypotheses to be tested. The discussion is sorted under the heading used in Sections 2 and 3. In investigating the availability of data for various Social and Community impacts the ABS publication *Measuring Wellbeing: Frameworks for Australian Social Statistics* was invaluable.

The reader will note that the following discussion refers to the availability or search for "the ideal data set" in order that the researchers can conduct statistical analysis to test hypotheses. In many cases our conclusion is that the "ideal data set" does not exist, in some instances a hypothesis cannot therefore be tested while in other instances, the quality of administrative data may permit more limited statistical analysis. It is important to recall that our principal objective is to compare the impacts of different gambling environments in Australia on key socio-economic characteristics within communities. We are concerned to identify those factors where there is evidence of a link between gambling (EGM) and test for specific social and community impacts (i.e., identify and test).

The research framework contains a second more descriptive level of analysis in which local and regional information is being collated, administrative data is being obtained and examined; in short a layered approach is being employed. Interviews, community forums, focus groups and discussions with Councils and others are occurring to assess community impacts. Both statistical hypothesis testing and community analysis will contribute to the final report.

Our principal concern in the following discussion is with "the ideal data set" to test hypothesis.

A4.1 Financial Problems

The academic literature, and other similar studies, discussed in Section 2 has identified the following types of negative financial impacts related to problem gambling:

- general financial problems; and
- bankruptcies.

Feedback from counselling organisations and other community organisations have indicated that the following additional types of negative financial impacts may also be caused by problem gambling:

- significant personal debt levels (6 responses);
- clients unable to meet the basic costs of living (5);
- increased demand for emergency relief (3);
- increased levels of bankruptcies (4);
- reductions in savings/sales of assets (6);
- loss of access to utilities (2)
- loss of housing/homelessness (6);
- decreased levels of maintenance for houses/cars; and
- an increase in money lending/pawnbroking (2).

General financial problems: the ideal data set to measure the incidence of problem gambling related financial problems would be a data collection on individuals/households experiencing financial difficulties, and whether the individual's/household's level of gambling expenditure is sufficient to be an important factor in the financial difficulty.

This ideal dataset does not appear to be available, although consideration will be given to the extent to which this ideal data could be sourced from the ABS' Household Expenditure Survey (a study of this type was recently undertaken by Access Economics). The Household Expenditure Survey collects data on measures of financial stress and on expenditures at the household level, however there are significant methodological problems with the use of this data to assess the social impact of gambling due to the risk that problem gamblers would not report their gambling expenditure. Indeed in a small survey conducted by the Productivity Commission with Problem Gamblers receiving treatment, only 29 per cent indicated that they would have responded honestly to the HES, with 33 per cent indicating that they would have concealed their problem and 24 per cent indicating that they would have refused to complete the survey at all. Despite this concern, it may be possible to use the Household Expenditure Survey data on indicators of financial stress to compare the number of households experiencing financial difficulties between the Victorian and Western Australian regions.

Bankruptcies: the ideal data set would be one that measured the number of personal and business bankruptcies that occur due to problem gambling in all communities. Since it is illegal to declare bankruptcy due to gambling the true number of cases cannot be ascertained. Instead, statistical analysis will be undertaken to compare total bankruptcy rates in EGM and non-EGM regions. Statistics on the number of bankruptcies are collected by the Inspector-General in Bankruptcy, and published in that organisation's annual report.

Personal debt: the ideal data set would be one that measured personal debt levels by the reason for the debt (so, for example debt for investment could be distinguished from debt for consumption spending). Unfortunately the reasons for debt are not available.

However, data in the Australian National Accounts provides information on debt and asset levels of households, and therefore we will be able to compare our regions on the basis of debt as a proportion of household assets, and as a proportion of household income.

Demand for emergency relief: the ideal data set would be a central collection of the value of all emergency financial relief provided in Australia by region, and the reason for which financial support was sought. Unfortunately, this type of data is not available. However the Centre is seeking information from welfare agencies with a presence in both Victoria and Western Australia, although it is not known whether the data that can be provided will be of sufficient quality to support statistical analysis.

Reductions in savings/sales of assets: the ideal data set would be one in which the reasons for dissavings could be distinguished (i.e. purchase of assets or consumption spending), and which identified changes in asset values between those caused by sales of assets rather than fluctuations in asset valuations. Unfortunately data at this level of detail is not available, however the Australian National Accounts include household savings by state.

Loss of access to utilities: the ideal data set would be one which recorded the number of households by region which had one or more types of utility cut off each quarter. Unfortunately no such data appears to be collected and therefore this dimension of impact will not be able to be investigated in this report. Potential sources of administrative data are being investigated.

Loss of housing/homelessness: the ideal data set would be one which was able to provide data on the number of persons currently homeless in a specified time period, as well as the number of persons who lose their homes in each period, by region. Data on the number of persons (or households) that lose access to housing does not appear to be available.

In terms of data on homelessness, the ABS has undertaken work in an attempt to improve the quality of homelessness estimates derived from census data (in Occasional Paper: Census of Population and Housing - Counting the Homeless, ABS Cat. No. 2041.0, which uses 1996 Census data). A similar report using 2001 Census data is due for release in November 2003. There are significant difficulties in using the data for analytical purposes. In particular, there is a significant difference in the rate of homelessness between the 'southern' States (NSW, SA, Vic., Tas. and the ACT) and the 'high growth' States (WA, Qld. and the NT), which is not explained by the ABS. The rate of homelessness per 10,000 residents in the 'southern' States ranges between 40.3 in the ACT and 49.4 in NSW. In contrast homelessness rates in WA are 71.5 per 10,000 residents, 77.3 in Queensland and 523.1 in the Northern Territory. The rate in the NT is explained in part by the numbers of indigenous Australians living in improvised dwellings, who account for 64 per cent of the NT's homeless. However even after taking this into account the rate is still much higher than that for the 'southern' States. As no demographic explanations are proffered for these significant between-state differences, comparative analysis of the potential impact of EGM gambling will not be possible.

Decreased levels of maintenance for houses/cars: the ideal data set would be one that measured expenditure on the maintenance of houses and cars by region. The ABS household expenditure survey in collecting information on people's expenditure on a range of items should provide this data, although it will only be available for 1998-99, and there are some concerns relating to the size of the relative standard errors at the SLA level.

Increase in money lending/pawnbroking: the ideal data set would be one which collected the value of loans received from pawnbrokers, payday lenders and finance companies, by the region of the person borrowing the money. Unfortunately it does not appear that this data is available. Potential sources of administrative data are being investigated.

A4.2 Workplace Performance

The academic literature, and other similar studies discussed in Section 2 has identified the following types of negative workplace performance impacts related to problem gambling:

- dismissal because of gambling related issues (poor work performance, absenteeism etc.);
- absenteeism; and
- low productivity.

Feedback from counselling organisations and other community organisations have indicated that the following additional types of negative workplace performance impacts may also be caused by problem gambling:

- unstable employment/loss of job (3);
- poor job performance; and
- absenteeism.

Dismissal because of gambling related issues: the ideal data set to address this dimension of community impact would be a national register of dismissals including the cause of the dismissal. Unfortunately no such data exists and this type of impact will not be able to be included in our analysis.

Low productivity/poor job performance/absenteeism: the ideal data set would be one which measured the amount of productivity due to electronic gaming machines, due to both lost time at work and distraction from EGMs. Unfortunately no data appears to be available which measures these factors, and consequently analysis will not be able to be undertaken on this dimension of social impact.

A4.3 Health

The academic literature, and other similar studies discussed in Section 2 has identified the following types of negative health impacts related to problem gambling:

- a disproportionate number of problem gamblers report being in moderate to poor physical or mental health;
- impacts that have been raised by problem gamblers are depression, stress, anxiety, lethargy, insomnia, poor nutrition, suicidal thoughts, increased caffeine and nicotine consumption, sweats, confusion, panic and ulcers (it should be noted that this study did not ascertain whether the rates of these conditions amongst problem gamblers were disproportionately high); and
- negative health impacts have also been found in the partners of problem gamblers.

Feedback from counselling organisations and other community organisations have indicated that the following additional types of negative health impacts may also be caused by problem gambling:

- health problems;
- mood instability;
- stress/anxiety;
- reduced self esteem/sense of self worth;
- increased use of mental health services;
- reduced attention spans;
- increased alcohol consumption; and
- increased smoking.

General health problems: The ideal data set would be one which measured the number of health problems in the community attributable (at least partially) to electronic gaming machine related problem gambling. Unfortunately data on the causes of ill-health is not able to determine this attribution. Statistical analysis will, however, be undertaken on general measures of ill health derived from the ABS' National Health Survey. Unfortunately this data is only collected at 5 year intervals which reduces the scope for analysis.

Mood instability: the ideal data set would be one which measured the prevalence of 'mood instability' in adults by region. Unfortunately, the ABS were not confident enough in the prevalence rates they collected for personality disorders in their "Survey of Mental Health and Wellbeing in Adults" to publish the results. Where 'mood instability' fits the criteria of a clinical anxiety disorder, or of Depression or Disthymia (see Section 4.4) then prevalence data will be collected on it in the Survey of Mental Health and Wellbeing.

Stress/anxiety: the ideal data set would be one which measured the prevalence of stress and anxiety in adults by region. Unfortunately this data is not available, however the ABS' "Survey of Mental Health and Wellbeing in Adults" collects information on anxiety disorders to the extent that they meet diagnostic criteria, such as those in the American Psychiatric Association's DSM-IV. Standard errors may preclude analysis below the State level.

Reduced self esteem/sense of self worth: the ideal data set would be one that measured levels of self-esteem, or the sense of self worth amongst adults, with data available by region. Unfortunately, no such data is available in Australia and consequently this form of impact will not be able to be included in our analysis.

Increased use of mental health services: the ideal data set would be one that recorded the extent of usage of all types of mental health services by region. Unfortunately a comprehensive dataset does not appear to exist, however the Australian Institute of Health and Welfare collect data on the clinical diagnosis, and form of care of all hospital separations in their National Hospital Morbidity Database; and the Health Insurance Commission collects data on all health transactions involving Medicare (i.e. it will be able to provide data on Medicare funded treatment by Psychiatrists etc).

Reduced attention spans: the ideal data set would be one that measured the attention spans of adults, and collected demographic data on the respondents as well as whether or not they used electronic gaming machines. Unfortunately, not such data is available in Australia and consequently this form of impact will not be included in our analysis.

Increased alcohol consumption/smoking: the ideal data set would be one that measured the extent to which individual's consumption of alcohol and or of tobacco products increases whilst they use electronic gaming machines. Unfortunately, no such data is available and this dimension of impact will not be able to be included in this study.

A4.4 Depression

The academic literature, and other similar studies discussed in Section 2 has identified potential causal links between problem gambling and depression, although it is also thought that there are causal links in the other direction. This linkage was also supported by the feedback received from counselling organisations and other community organisations.

Depression prevalence: the ideal data set would be to measure the number people suffering depression due to the electronic gaming machines. As with general health statistics, causally linked information is not available on gambling. However statistical analysis will be undertaken on both data on depression from the ABS' "Survey of Mental Health and Wellbeing in Adults" which collects information on the number of persons whose survey responses suggest that they match the clinical criteria for both Depression and Disthymia (a constant or recurring depression which is not severe enough to be diagnosed as recurrent depressive disorder), and data on hospital separations from the National Hospital Morbidity Database, collected by the Australian Institute of Health and Welfare.

A4.5 Suicide

The academic literature, and other similar studies discussed in Section 2 has identified links between problem gambling and suicide, suicide attempts and suicidal ideation. These links are also supported by the feedback received from counselling organisations and other community organisations.

Number of suicides: the ideal data set to measure the impact on electronic gambling machines on the number of suicides in the community would be the number of suicides by region and cause. Unfortunately this data is not available, as the reasons underlying a suicide are not always apparent, nor is there a consistent protocol for recording the causes of suicide where they are discernable. Instead, statistical analysis will be undertaken comparing the matched communities on data from the ABS publication '3309.0 Suicides, Australia, 1921-1998' that records every suicide that occurred in Australia over the publication's time range by year and location. Relatively small numbers of suicides at the SLA level may mean that the data fluctuates significantly due to random factors.

Suicide attempts: the ideal dataset to measure this form of impact of electronic gambling machines would be the number of suicide attempts by region and cause. Unfortunately this data is not available, as the reasons underlying a suicide attempt are not always apparent, nor are suicide attempts necessarily reported. More general data on the number of suicide attempts is also not available, and consequently this form of impact will not be able to be included in the interregional comparison.

Suicidal ideation: the ideal dataset to measure this form of impact of electronic gambling machines would be one which estimated the number of persons who experienced suicidal ideation in a given period of time, by cause. Again, no data is available (as far as we can determine) on suicidal ideation, and consequently this form of impact will not be able to be included in the interregional comparison.

A4.6 Family Breakdown

The academic literature, and other similar studies discussed in Section 2 has identified divorce/separation from partner as a negative impact of EGM related problem gambling.

Feedback from counselling organisations and other community organisations have indicated that the following types of family breakdown impact may also be caused by problem gambling:

- separation and divorce,
- arguments in families; and
- less time spent with families.

Divorce: the ideal data set to measure the impact on electronic gambling machines on the number of divorces in the community would have the reason for every divorce recorded. Instead, statistical analysis will be undertaken on data from the ABS publication '3310.0 Marriages and Divorces, Australia', which reports the annual data by region for all registered divorces.

As other relationships aren't officially registered no data is available on rates of breakdown in relationships other than marriage. Consequently, analysis will not be able to be undertaken on this dimension of community impact.

Arguments in families/less time spent with families: again, this type of quality of life indicator is not available. It may be possible to at least partially address these types of impacts by analysing data from Relationships Australia on the number of persons seeking marriage/relationship counselling.

A4.7 Effects on Children

The academic literature, and other similar studies discussed in Section 2 has identified the following types of negative impacts on the children of problem gamblers:

- poverty;
- lack of essentials (such as food and changes in quality of food);
- mood disorders;
- increased rates of absenteeism from school, and increased school dropout rates;
- loss of trust in parent;
- increased probability of undertaking 'risky' behaviour (drinking, taking drugs);
- increased risk of developing gambling problems;
- suicidal ideation; and
- suicide (in one study the risk was double that of the general adult population).

Feedback from counselling organisations and other community organisations have indicated the following types of negative impacts on the children of problem gamblers:

- missing out on recreational activities and holidays;
- increase in child neglect; and
- loss of self-esteem and self-confidence.

Poverty: the ideal data set to measure the impact on electronic gambling machines on childhood poverty would be one which provided information on expenditures on 'essentials' in households including a problem gambler and compared them to regional averages, as well as cost of living benchmarks. Unfortunately no such data exists. However, it may be possible to compare expenditure data on "essentials" from the ABS Household Expenditure Survey (HES) between our Victorian and Western Australian regions for households in similar income groups. Data could also be compared between regions on the proportions of households with children which responded affirmatively to relevant questions on financial stress in the HES. Unfortunately, neither of these analyses could be restricted to households containing problems gamblers as there is no way to identify them in the HES. Nor, can the analysis be restricted to those households that recorded at least some expenditure on EGM gambling, because it is likely that some persons who gambled on EGMs (and particularly some problem gamblers) did not record the existence of their EGM spending. See the discussion at Section 4.1.

Suicide: the ideal data set to measure the impacts on children of problem gamblers (including later in life) would be one which linked suicides to a cause, and provided information on life experiences. Again, this data is not available, as the reasons underlying a suicide are not always apparent, nor is there a consistent protocol for

recording the causes of suicide where they are discernable. It is possible that analysis may be able to be undertaken comparing rates of adolescent suicides between the matched communities using data from the ABS publication '3309.0 Suicides, Australia, 1921-1998'. Relatively small numbers of suicides, particularly when restricted to adolescents, at the SLA level may mean that the data fluctuates significantly due to random factors.

Lack of essentials/mood disorders/loss of trust in parent/increased probability of undertaking 'risky' behaviour/suicidal ideation/missing out on recreational activities and holidays/loss of self-esteem and self-confidence: the ideal data set would be one which measured the quality of life of children and the impact electronic gaming machines has on it. Unfortunately no such data collection exists, and indeed it would be difficult to collect such information even if resources were not an issue. Consequently analysis will not be able to be undertaken on these aspects of the impact of EGM gambling on children.

Increase in child neglect: the ideal data set to measure the impact on electronic gaming machines on child neglect would be one which recorded the number of cases of child neglect where problem gambling was a causal factor. Unfortunately data of this type is not available. Some regional comparative analysis may be able to be undertaken on the number of child protection interventions that occur for reasons of child neglect, although differences between the States on issues such as funding of child welfare agencies, and policies on how to deal with reports of child neglect, may be so great as to render any comparison meaningless. Assessment of administrative data is currently being undertaken.

A4.8 Violence

The academic literature, and other similar studies discussed in Section 2 has identified some evidence of a link between problem gambling and domestic violence.

Feedback from counselling organisations and other community organisations also raised domestic violence as a negative community impact of EGM related problem gambling.

Domestic violence: the ideal data set would be one which measured the number of violent incidents in the home related to electronic gaming machines. Unfortunately the available data on this area, the ABS' Crime and Safety Survey, does not record the triggers of crime. Statistical analysis will, however, be undertaken on the relative prevalence of domestic violence between the regions with and without EGMs.

A4.9 Crime

The academic literature, and other similar studies discussed in Section 2 has identified evidence of links between EGM related problem gambling, and financial and property offences, particularly theft from employers and family members, used to fund gambling. The Productivity Commission's (1999) report cites some evidence of criminal activity amongst problem gamblers.

Feedback from counselling organisations and other community organisations generally cited an increase in crime, particularly theft from employers/family members, as a negative impact of EGM gambling.

Financial crime: the ideal data set to measure the impact of electronic gambling machines on crime in the community would have the reasons for every crime recorded. Unfortunately the available data on this area, the ABS' Crime and Safety Survey, does not record the triggers of crime. The Crime and Safety Survey collects data on incidents of crimes by type and other related issues such as perception of level of criminal activity. Consequently, statistical analysis will be undertaken comparing the prevalence of those types of crime that have been linked to the financing of problem gambling — embezzlement, fraud, petty theft, and other financial crimes — between our regions.

A4.10 (Negative) Social Capital Impacts

No sources of information were found in the academic and related literature on the social capital impacts of electronic gaming machine gambling. Measures of impact on social capital are primarily local area or local community impacts. The sources of information on social capital impacts principally derive from local government, local organisations and contacts and most often need to be constructed from the ground up. The indicators of impact (both positive and negative) may differ for each region, simply because of the economic, social, geographical and historical context of regions.

Preliminary feedback from counselling organisations, local government and community organisations have indicated that the following types of negative social capital impact may also be caused by problem gambling:

- isolation, and;
- lack of social variety;
- breakdowns in relationships with friends;
- breakdown of the social fabric;
- reduced live entertainment in venues;
- the solitary nature of playing EGMs;
- less community involvement/volunteerism; and
- the lack of alternative entertainment facilities in new suburbs.

Isolation, breakdowns in relationships with friends, breakdown of the social fabric, the solitary nature of playing EGMs: the ideal data set for these social capital impacts would be for data to be collected on the levels of social capital/wellbeing in Australian communities. Unfortunately no such collection exists, and consequently this study will not be able to compare the selected regions on this type of impact. It is possible that a custom extraction from the ABS survey "How Australians Use Their Time, 1997" would be able to address this issue by allowing a comparison of the extent to which persons in Victorian and Western Australian regions spend time with friends and family, however the numbers of problem gamblers may be too small for any impact to be apparent in this survey data.

Lack of social variety: the ideal dataset to assess the extent to which those participating in electronic gaming machines are also engaging in other social/recreational activities. It is possible that a custom extraction from the ABS survey "How Australians Use Their Time, 1997" would be able to address this issue, but this will need to be investigated with the ABS. Other data collections, such as the Household Expenditure Survey, would only be able to provide a partial answer as they focus on expenditure and therefore would not include activities such as socialising with friends and family.

Reduced live entertainment in venues: the ideal dataset would be one that recorded the number hotels and licensed clubs that had at least one live performances in a given week, as well as the total number of live performances in hotels and licensed clubs, by region. Unfortunately this data doesn't appear to be available, however it may be possible for the ABS to extract expenditure on live entertainment, and the number of operations making such expenditure, from the publication "Clubs, Hotels, Taverns and Bars" (Cat. No. 8687), although obviously expenditure is not strictly comparable with the number of live acts.

Less community involvement/volunteerism: the ideal data set for measuring this potential impact would be a dataset which assesses the extent to which those participating in electronic gaming machines are also engaging in voluntary work. The ABS publication "Voluntary Work Survey, 2000" is the best source of information on voluntary work, and should allow comparison between regions but it does not collect information on other activities. The alternative data source would be a custom extraction from the ABS survey "How Australians Use Their Time, 1997".

The lack of alternative entertainment facilities in new suburbs: in order to investigate whether or not there appears to be a lack of alternative entertainment facilities in 'new' suburbs when EGM venues are present we will use a custom extraction from the ABS "Economic Activity Survey" to collect information on the number of businesses of the type that provide entertainment/recreational services in each of our regions. Information will also be sought from the relevant councils on the extent of recreational facilities and sporting/social clubs in their area, distance to nearest cinema, participation in recreational activities run by the council.

A4.11 Economic Impacts

Employment impacts were not considered in the review of academic literature, as it is the researchers' considered opinion that the shift in expenditure towards EGM gambling represents a transfer away from money that would have been spent in some other sector. Consequently, there is likely to be little or no net impact on employment (either positive or negative) due to the expenditure on gambling. For this reason no such impacts will be considered in this study, although some analysis will be undertaken on employment patterns (both between the regions and within the regions over time) to investigate how EGM gambling appears to impact on sectoral employment patterns.

Feedback from counselling organisations and other community organisations have indicated that they regard the following types of negative economic impact as being related to EGM related problem gambling:

- closures of (and job losses in) non-gambling businesses;
- decreased retail sales; and
- reduced investment in non-gambling business, leading to a lack of job opportunities.

A4.12 Positive Impacts

As discussed previously, employment impacts were not considered in the review of academic literature, as the shift in expenditure towards EGM gambling represents a transfer and consequently there is likely to be little or no **net** impact on employment.

The economic impact that is potentially significant is the consumer surplus benefit Victorian's derive from having a more highly valued consumption good (EGM gambling) available. It should be noted in this context that it is inappropriate to include the 'induced' expenditure caused by the irrational behaviour of problem gamblers in a consumer surplus calculation. As discussed under Economic Impacts it is not appropriate to use consumer surplus when comparing regions with and without access to a particular good or service, and consequently consumer surplus will not be included in our comparison of Victorian and Western Australian regions. Other potential benefits that were raised anecdotally in the literature were:

- hotels are more accessible to women, increasing their recreational opportunities;
- increasing the range of recreational opportunities available to persons with limited English; and
- increasing the extent to which venues engage in responsible practices in serving alcohol, reducing alcohol abuse and disorderly conduct at venues.

Feedback from counselling organisations and other community organisations have indicated that the following types of positive social impact may be caused by problem gambling:

- women empowered to go out alone; and
- competition amongst publicans.

Similarly feedback from industry stakeholders raised the following potential positive impacts of EGM gambling:

- Consumer surplus benefits;
- increased usage of hotels and licensed clubs, particularly by women and older persons;
- reduced levels of violent crime in and around hotels;
- increased numbers of community groups, social/sporting clubs; and
- improved recreational facilities.

Consumer surplus: conceptually, consumer surplus should be used in weighing the benefits and costs of a particular type of good or service, or in examining the benefits and costs of a marginal increase in the availability of that good or service. It is not appropriate to use measures of consumer surplus to compare a situation where good (A)

was available to one group but not available to a comparative group, nor is it appropriate as a framework for assessing the loss or gain from banning a good or service.¹⁶

Hotels more accessible to women/ women empowered to go out alone/increased usage of hotels and licensed clubs, particularly by women and older persons: the ideal dataset to measure this would be one that measured the extent to which women and older persons accessed hotels and licensed clubs, and the extent to which this changed with the introduction of EGM gambling. Whilst a venue specific analysis will not be possible, a custom extraction of time series data from the 1992 and 1997 collections of the ABS survey "How Australians Use Their Time" should allow a comparison between our Victorian and Western Australian regions on the extent to which women and older persons visit Hotels and Licensed Clubs, and how this has changed over time. (This will be supplemented from information obtained in the mail out survey to selected Victorian and Western Australian households.)

Increased the range of recreational opportunities available to persons with limited English: the ideal dataset to measure this would be one that measured the extent to which persons with limited English language skills accessed hotels and licensed clubs, and the extent to which this changed with the introduction of EGM gambling. Unfortunately demographic information collected as background to ABS surveys does not usually include English language ability, and consequently this dimension of impact will not be able to be included.

Competition amongst publicans: this issue is not truly a community impact of electronic gaming machine gambling, and hence it will not be considered in this study.

Reduced levels of violent crime around hotels: the ideal dataset would be one which measured the number of violent crimes that occurred in or around hotels or licensed clubs, and whether or not the premises had EGMs. Unfortunately, this level of detail is not available in the existing data. We will investigate whether information can be obtained on the number of police responses to hotels and licensed clubs in each of our regions, but it is unlikely that we will be able to include this impact in our analysis.¹⁷

Increased numbers of community groups, social/sporting clubs: the ideal dataset would be one that collected information on the number of community groups and clubs supported by hotels or licensed clubs, and whether or not the supporting venue had EGMs. Unfortunately this level of detail is not available (although the ABS survey "How Australians Use Their Time, 1997" includes information of participation in sporting activity), however we will seek information from the relevant councils on the extent of sporting/social clubs in their area. It is unlikely, however, that we will be able to include this impact in our analysis.

¹⁶ The difficulty arises because straightforward estimation of consumer surplus losses requires the researcher to assume constant price elasticities of demand, an assumption that cannot be sustained in the case of a ban (or a near ban, as modelled by ACIL, 2001). This view is shared by the Productivity Commission, see Banks, 2002 (p.7).

¹⁷ We note that Victorian Police are proceeding with a program to map hotel/club of origin with any subsequent crime.

Improved recreational facilities: this is an extremely difficult factor to try and measure, and 'improvement' is a somewhat subjective concept. Capital expenditure figures (from the ABS publication "Clubs, Hotels, Taverns and Bars" (Cat. No. 8687) by hotels and licensed clubs in our regions could potentially provide some guide, however it is not possible to distinguish between capital expenditures necessary to offer EGM gambling services, from general improvements in hotels. Consequently this dimension of impact will not be included in our study.

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Appendix B

Correspondence to Community Organisations, Industry and Victorian and Western Australian Councils

Similar letters were sent to the following (copies not included here):

- to community organisations in each area;
- to representative organisations (health, welfare, sporting);
- to Gambler's Help counsellors;
- to select industry groups (operators, selected venues);
- to financial counsellors.



SOUTH AUSTRALIAN
CENTRE FOR ECONOMIC STUDIES



ADELAIDE & FLINDERS UNIVERSITIES

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Letter to Councils

11 July, 2003

Gambling Research Panel Community Impact of Electronic Gaming Machine Gambling: Comparative Study, Victoria and Western Australia

The SA Centre for Economic Studies of the Adelaide and Flinders Universities has been commissioned by the Victorian Gambling Research Panel to undertake a study on the 'Community Impacts of Electronic Gaming Machine Gambling'. The primary objective of this project is to compare the impacts of different gambling environments in Australia on key socio-economic characteristics within the affected communities. The study will be undertaken by means of a comparative analysis of regions in Victoria with similar regions in Western Australia — where there are no EGMs outside of Burswood Casino.

Your council (or a post-code area within it) has been selected as one of the Victorian Regions. The table featured over the page details the areas matched for comparison between Victorian and Western Australia.

The objective of the study is to provide a better understanding of the relationship between gambling environments, opportunities and behavioural patterns on the one hand, and patterns of expenditure, recreational activity and community well-being on the other. It is hoped that this will yield useful information and advice for policy makers and planners concerned with the creation of sustainable communities. A copy of the project specifications and the report on the selection of matched areas in Victorian and Western Australia is enclosed for your information.

The SA Centre for Economic Studies has extensive experience in project management and in the conduct of large scale surveys. The Director, Michael O'Neil, has overseen numerous projects in relation to the gaming industry in South Australia and Victoria, and completed several major projects on regional development in South Australia, and is a participant in the international benchmarking project on monitoring quality of life.

	Victoria	Western Australia
Metropolitan:	City of Wyndham City of Maribyrnong	City of Cockburn City of Belmont
Non-Metropolitan:	City of Greater Shepparton City of Warrnambool	City of Albany City of Geraldton
Postcodes:	3875, Bairnsdale (East Gippsland Shire) 3915, Hastings (Mornington Peninsula Shire) 3799, Warburton (Yarra Ranges Shire)	6280, Busselton (Shire of Busselton) 6167, Kwinana (Town of Kwinana) 6073, Mundaring (Mundaring Shire)

The Centre has successfully completed a large scale project for the GRP on the Victorian Self Exclusion program for problem gamblers, and is in the process of undertaking an evaluation of the Victorian regional caps on electronic gaming machine numbers.

The Centre is hoping to be able to work cooperatively with the relevant councils in undertaking this study. To this end, we will try and structure the research approach in such a way that the information gathered and its interpretations benefits the councils, as well as fulfilling the requirements of the study.

Staff engaged on this project will be coming to Victoria to visit each region and to conduct interviews and gather data as required. We will also be distributing a survey to a sample of the population in each region. A final date has yet to be fixed for both the survey and the visits.

In the first instance, we would be grateful if you could forward to us the name(s) and contact details of the person(s) in your council with whom the Centre should liaise regarding this important research project. Please email to michael.oneil@adelaide.edu.au.

If you require any further information in relation to this project, please feel free to contact me on (08) 8303 5555 or email as above. Alternatively, if you wish to discuss the project with the Gambling Research Panel — Victoria, please feel free to contact Robert Maver, Project Officer, Gambling Research Panel Secretariat, on telephone (03) 9627 6580 or email: robert.maver@justice.vic.gov.au.

Yours sincerely,

Michael O'Neil
Director

Appendix C

Financial Counsellors Survey

Surveys were forwarded to Financial Counsellors in

- Victoria;
- Western Australia; and
- South Australia

CONFIDENTIAL

Questions A and B will not be reported singularly or for any agency. The responses will be aggregated for each State to estimate B as a proportion of A based on survey responses.

- QA:** On average, how many separate clients do you see a month? N = _____
- QB:** On average, how many of these clients indicate (or you believe) have a gambling problem? N = _____

Section A: Financial Hardship in General

1. Thinking about the people with financial problems that you see, what are the most common causes of financial hardship that you observe (e.g., relationship breakdown, poor budgeting skills, debt/credit over commitment, ill health, job loss, gambling/addictions)?

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2. What are the most common triggers that induces people who have financial related problems to seek and attend counselling (e.g., unexpected debt, gas, electricity or telephone disconnection, summons, seeking emergency relief, gambling losses, suicide attempts, separation, etc.)?

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3. What are the characteristics of groups or individuals with financial related problems that you most commonly see (e.g., gender, age, marital status, work status [e.g., unemployed], occupation, income, etc.)?

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4. How often do you consider that the following types of additional harms are experienced by people suffering financial hardship? (Please tick one box only for each harm).

	In most cases	Often	Occasionally	Never
Relationship breakdown (e.g., divorce, separation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical violence within the family (i.e., domestic abuse)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decreased work productivity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unemployment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low self-esteem or sense of worth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social isolation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poor physical health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drug abuse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcoholism or binge drinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crime	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Debt burden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poorer economic well being of family members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poorer physical well being of family members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Homelessness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suicide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of essential services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

.....

5. Do any particular forms of financial related problems result in greater harm to the person or their family than other forms? If so, what are they and in what way are they more severe?

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6. What types of public intervention to assist people experiencing financial hardship are most important in your view (e.g., public/emergency housing, job search, essential service assistance, tougher legislation [e.g., credit], additional counselling resources)?

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Section 2: Financial Hardship Related to Gambling

7. To what extent is gambling a cause of financial hardship among the people you counsel?

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8. Of those who present with gambling related financial problems, in your experience, what proportion would result from

- electronic gaming machines (poker machines) per cent
 - wagering/sports betting losses per cent
 - casino table gaming per cent
 - private gaming (e.g., card games with friends) per cent
 - other gambling forms per cent
- 100 per cent

9. How often do you consider that the following types of additional harms are associated with people suffering gambling related financial hardship? (Please tick one box only for each harm).

	In most cases	Often	Occasionally	Never
Relationship breakdown (e.g., divorce, separation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical violence within the family (i.e., domestic abuse)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decreased work productivity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unemployment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low self-esteem or sense of worth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social isolation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poor physical health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drug abuse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcoholism or binge drinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crime	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Debt burden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poorer economic well being of family members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poorer physical well being of family members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Homelessness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suicide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of essential services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....				

10. Do you consider gambling related financial problems to be less or more severe in terms of harm to individuals and their families than other forms of financial related hardship?

- Less severe
- More severe
- Similar in level of harm to other forms
- Don't know

In what ways is gambling related financial hardship less or more severe?

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11. In terms of public intervention, what is the best way to assist people suffering gambling related financial hardship?

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We invite you to provide your name and telephone number should we need to discuss or clarify any response. You are not obliged to provide either; we would also welcome postcode of response.

Postcode:

Name: **Telephone:**

**We thank you very much for your time and effort in completing this questionnaire.
Please return the survey in the enclosed reply paid envelope by
Friday, 27th February, 2004.**

Appendix D

Brief Survey for Victorian Medical Practitioners Comparative Analysis: Victoria and Western Australia

Based on _____ (*insert approximate number of patient visits*) in last six months.

1. Thinking about the last six months, what proportion of your patients have presented with health issues arising from gambling? _____ per cent

2. What proportion of these patients were:

- female _____ per cent
- male _____ per cent

You may wish to comment on average age/profile of patient:

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3. Thinking about the total number of patient visits, what proportion would you say:

- are under doctor’s care for stress related health issues due to gambling? _____ per cent
- are under doctor’s care for physical or emotional problems due to problem gambling? _____ per cent
- were diagnosed as ‘seriously depressed’ arising from gambling? _____ per cent
- had considered or reported to you thoughts about or attempted suicide due to gambling problems? _____ per cent
- reported experiencing problems at work due to gambling? _____ per cent
- reported family/relationship issues due to excessive gambling? _____ per cent
- led to breakup of a significant relationship? _____ per cent

4. Do you observe any consistent correlations of problem gambling with other issues/symptoms in the patients you see (e.g., alcohol, drug use, social isolation psychological issues, etc.)? Please comment.

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5. What proportion of patients would you refer to help services (such as Gambler's Help, financial counsellors, other)? _____ per cent

6. Reflecting on your experience as a General Practitioner, are you able to comment on any of the following:

- trends in problem gamblers visiting a General Practitioner?
- severity of impact on individuals/families from excessive gambling?
- gender based differences by presenting patient?

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7. Please feel free to provide any other comments:

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Thank you for your assistance. It would be appreciated if you could please return the survey in the reply paid envelope by Friday, 23rd April 2004. All responses are totally confidential.

Appendix E

Survey of Residents

Recreation, Leisure and Gambling Activities and Attitudes

1. Recreation activities

Thinking about what you do in your spare time, in the past year how often have you undertaken the following activities? *(Please tick one box for each activity)*

Recreational Activity	Never in the past year	Once or twice in the past year	Once every few months	Once or twice every month	Once a week or more
Hosted a BBQ.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Been on a picnic with your family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Been on a weekend trip with your family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visited family/relatives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gone to your local swimming pool	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gone to the beach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seen a film at a cinema	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended an opera or a theatrical performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visited friends in your local area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended a professional sporting event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended a horse/trots/greyhound race	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visited your local hotel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visited a licensed club	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Played lotto (X-Lotto, PowerBall, Tatts, Pools)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bought a raffle ticket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Played bingo at a club or hall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Played sport (golf, cricket, netball, bowls, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Been fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Been surfing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended a concert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended a fair in your local community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended a school function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Recreation: Casino

(a) How many times have you visited the casino in the past year? times

(b) Which of the following activities did you undertake while visiting the casino? *(Please tick one box for each activity)*

Activity	Never	Sometimes	Often	Always
Met up with friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Played electronic gaming machines (poker machines)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Played table games (eg, blackjack, roulette etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Had a meal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended live entertainment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended a business or social function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Used ATM (Automatic Teller Machine) facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Rented accommodation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (<i>please specify</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....				

3. Recreation: Hotels and Licensed Clubs

(a) How often have you visited your local hotel or licensed club in the past year? *(Please tick one box only)*

Never	Once or twice in the year	Once every few months	Once a month	Once a week	Every day or most days
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(b) When you visited your local hotel or licensed club, what activities did you participate in? *(Please tick one box for each activity)*

Activities	Never	Sometimes	Often	Always
Met up with friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Had a drink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Had a meal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Played electronic gaming machines (poker machines) (Vic only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Placed a bet on horses/trots/greyhounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended live entertainment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Watched sporting telecasts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Used the ATM (Automatic Teller Machine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other <i>(please specify)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(c) What is your **main** reason for visiting your local hotel or licensed club?
.....

4. Recreation: Wagering

How often did you undertake the following activities in the past year? *(Please tick one box for each activity)*

Activity	Never in the past year	Once or twice in the past year	Once every few months	Once or twice every month	Once a week or more
Placed a bet:					
– on a horse/trots/greyhound race	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
– on a professional sporting event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
– at your local TAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
– at the track or sporting venue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
– at your local hotel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
– at your local licensed club	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
– at the casino	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
– on the internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

– by telephone



5. Your attitude towards wagering and gambling

We are interested in your attitudes towards wagering and gambling and the effects of these activities on your local community. *(Please indicate whether you agree or disagree with each statement by ticking one box)*

Statement	Agree	Disagree	Unsure
Gambling is an acceptable activity in my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gambling is too widely accessible in my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gambling should not be allowed to be advertised	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are enough opportunities to gamble in my local area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are enough recreational activities (other than gambling) in my local area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The current level of gambling in our community is appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wagering on races is less likely to cause harm to gamblers than playing electronic gaming machines (poker machines)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gambling is an important source of entertainment in my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Problem gambling is a serious social problem in my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gambling does more harm to the community than good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know someone who has experienced problems with:			
– electronic gaming machine (poker machine) gambling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
– wagering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
– other gambling (eg, lotteries, scratch tickets, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am aware of support services available for people with gambling problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Government decision making

When Government undertakes a review of gambling activities, what do you believe are the important factors that should guide government decision making? *(Please tick whether you believe each factor below to be very important, of some importance or not at all important)*

Factors	Very important	Of some importance	Not at all important
Encourage competition in the gambling industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limit the harm problem gambling can cause people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prevent criminal activity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restrict opportunities to gamble	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encourage tourism related to gambling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure gambling profits fund worthy causes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create jobs in the gambling industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protect jobs in other industries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Support the racing industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure fairness for players	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Raise taxes from gambling in order to avoid raising other state taxes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Avoid restricting the availability of gambling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inform people of the risks of developing gambling problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inform people of the chance of winning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- | | | | |
|---|--------------------------|--------------------------|--------------------------|
| Provide counselling for people with gambling problems | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Provide financial assistance to people with gambling problems | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Restrict gambling by minors | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

7. About your community

How do you feel about each of the following statements? *(Please tick the appropriate box for each statement)*

Statement	Agree	Disagree
I personally feel part of my local community	<input type="checkbox"/>	<input type="checkbox"/>
People get on pretty well in my local community	<input type="checkbox"/>	<input type="checkbox"/>
People are good neighbours in my local community	<input type="checkbox"/>	<input type="checkbox"/>
There is a strong 'community spirit'	<input type="checkbox"/>	<input type="checkbox"/>
The local community facilities and services are good (i.e., child care, local library, local school, health care, parks and gardens)	<input type="checkbox"/>	<input type="checkbox"/>
I use these facilities and services regularly	<input type="checkbox"/>	<input type="checkbox"/>

8. About you

These questions are important to ensure that we survey a wide cross-section of people. *(Please tick one box for each question)*

Gender

Male Female

Age

15-24 25-34 35-44 45-54 55-64 65+

Marital status

Married De Facto Separated Divorced Widowed Never Married

Dependent children

0 1 2 3 4 More than 4

Work status

Work full-time Work part-time Unemployed Household duties only Student Retired/Pensioner

Highest level of education completed

Primary school High school (Year 11 or below) High school (Year 12) Certificate or diploma Bachelors degree Postgraduate degree

We thank you very much for your time and effort in completing this questionnaire.
Please return the questionnaire in the enclosed reply paid envelope by Friday, 12th March, 2004.