of the Commonwealth government.

The views expressed in this paper do not necessarily reflect the opinions of

Department of Premier and Cabinet

Victorian Household Formation
of

Preliminary Productions

Impact Centre

School of Economics and the

Institute of Economics and the

University of Melbourne and

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University of Melbourne and
6. Household Population - Medium Projection

5. Marital Status

4. Demographic Assumptions

3. Economic Scenario

2.5 Summary of the INTER method for forecasting household heads
2.4 Reproduction of household heads
2.3 Labor force and labor market participation rates
2.2 Population projection methodology
2.1 Introduction

1. Household Population Projection Facility

1. Introduction

Preface

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APPENDIX A. A BIBLIOGRAPHIC GUIDE TO THE IMPACT POPULATION PROJECTION FACILITY. 34
PREFACE
The paper, a matter discussed in more detail in Section 4 of this economic scenario was suitable for the Victoria economy, with the growth in population and labour force, as illustrated by the results of the set of projections of the economic scenario. The economic scenario is also described in a further paper.

No. 22, September 1995

In a later study of Australia's households, the economic scenario is basically that developed by the Victoria Household Project for an earlier study of Australia's households, which evaluates such a description and migration levels.

(1) a demographic scenario explaining the value of certain indicators of unemployment and underemployment; and

owing to a government strategy and action, such variables as

The introduction to this scenario requires several major inputs.

A. Introduction

is contained in Appendix A.

Appendix B contains the documentation provided by the IMAG Project. A guide to this documentation is contained in several papers, including those sources, is contained in several papers, and in the process developed by the IMAG Project. Develo...
The demographic scenario incorporates the assumptions underlying the principal population projections developed by the Forecasts Project Team, Department of the Premier and Cabinet and set out in the Team's discussion paper entitled, Preliminary Population Projections, Victoria, 1981 to 2001, October 1982. Additional data and assumptions were required to generate population projections by marital status. The elements of the demographic scenario are discussed in Section 4.

The projections of population and numbers of households generated using the Facility and the above scenarios are analysed in Sections 5 and 6. These projections are conditional projections to the year 2001 dependent on the imposed demographic scenario and an economic scenario of medium growth in the Victorian and Australian economies. Some discussion of the sensitivity of the projections to variation in these scenarios is given in Section 7.

in which the authors validate the Facility by reproducing a projection of the Australian population published by the Australian Bureau of Statistics, and


in which the authors report the first simulations of the population and labour force produced with the complete Facility (that is involving both the demographic and econometric models of population and labour force behaviour). The labour force projections are analysed in greater detail in:


while a set of household projections for Australia are presented in:


The documentation of the Facility is more extensive than that listed above and a full list of papers is given in:


It is recommended that the interested reader begins with Sams and Williams (1982 a) and Williams and Sams (1982).

Copies of all publications may be obtained from:

Mr. M. Kenderes,
IMPACT Information Officer,
Industries Assistance Commission,
P.O. Box 80,
BELCONNEN, A.C.T. 2616
Appendix A: A Philosophic Quotef to the Impact Population 

2. Impact Population: Labour Force and Household Proportion

2.1 Introduction

2.2 Impact Population Facility

The results of some current work on the facility are reported in

The population projection facility is designed to provide:

- Results of the population projection at 10-year intervals
- A computer-generated forecast of population projections for any age or sex or marital status, and any economic or demographic characteristics
- An impact on the employment, education, and economic growth of the region

The population projection facility is used in the following areas:

- Economic planning
- Housing development
- Environmental planning
- Transportation planning

2.3 Impact Population Facility

The impact population facility is used to:

- Estimate the impact of a current or projected population on the economy
- Forecast the impact of changes in the population on the economy
- Assess the impact of future population trends on the economy

The impact population facility is also used to:

- Develop economic forecasts
- Assess the impact of demographic changes on the economy
- Plan for future economic needs

2.4 Impact Population Facility

The impact population facility is a tool for:

- Assessing the impact of population changes on the economy
- Forecasting the impact of population changes on the economy
- Planning for future economic needs

2.5 Impact Population Facility

The impact population facility is used to:

- Assess the impact of current and projected population changes on the economy
- Forecast the impact of future population changes on the economy
- Plan for future economic needs

The impact population facility is a valuable tool for:

- Economic planning
- Housing development
- Environmental planning
- Transportation planning

The impact population facility is a tool for:

- Assessing the impact of population changes on the economy
- Forecasting the impact of population changes on the economy
- Planning for future economic needs
This level of disaggregation is maintained for all population stocks and demographic flows, such as deaths, migration and marital status change, and the Facility ensures that strict accounting identities are maintained between all population stocks and flows. In particular, the Facility incorporates a two-sex marriage and divorce model which constrains the number of marriages (and divorces) for each sex to be equal. The Facility is also able to produce sub-national projections, as reported in this paper.

In these projections of population, we have chosen to set the level of fertility externally. The Facility has the capacity to incorporate fertility and marriage and divorce rates as determined by an econometric model of fertility, marriage and divorce and female labour force participation (See: Clive Brooks, Dennis Sams and Lynne S. Williams, "An Econometric Model of Fertility, Marriage, Divorce and Labour Force Participation for Australian Women, 1921/22 to 1975/76" IMPACT Preliminary Working Paper No. BP-29, May 1982), but to ensure compatibility with Victorian projections produced by the Forecasts Project Team, econometric determination of fertility rates was not undertaken in this exercise.

2.3 Econometric Determination of Marriage, Divorce and Female Labour Force Participation Rates

The econometric model mentioned above has been used to provide projections of marriage and divorce rates by sex and age. It has also been used to provide projections of female labour force participation rates by marital status and age group. The econometric relationships estimated from national data from the 1961, 1966, 1971 and 1976 Censuses were assumed to apply to the determination of the Victorian rates. However, differentials between Victorian and Australian age-specific labour force participation rates and marriage and divorce rates at the beginning of the projection period have also been allowed to influence the projected rates. Male labour force participation rates were not projected using an econometric model, but were projected as part of the economic scenario.

8. POSSIBLE REVISIONS TO THE CURRENT ANALYSIS

At the time of making these projections, Victorian household headship ratios as measured by the 1981 Census of Population and Housing were not yet available. Re-estimation of the projections with this information would be desirable. The major findings in the analysis are unlikely to change, but there may be changes in the scale of household formation by selected age groups by marital status.

A more important development with release of the 1981 Census data for both Victoria and Australia is the opportunity to examine the validity of the existing IMPACT models and re-estimate sections of them as required. Existing resource constraints imply that this task, which is more ambitious than simply altering the base year data, will not be possible for some time.

In contrast, it is possible to incorporate quite easily any future revisions to Victorian population projections which might be produced by the Forecasts Project Team or other organisations such as the Australian Bureau of Statistics.
captures not only the increase in rates over the period but also the development of the model. The model was also designed to explain the development of the labor force's growth—
the involvement of a new entrant in the labor market has been shown to have a positive effect on household savings and economic activity.

The model also takes into account the distribution of income from the above sources for households and businesses, which are not included in the government transfers such as child endowment, the potential for further growth in the economy, and the impact of changes in government welfare payments, such as pensions and unemployment benefits. The model also considers the impact of changes in consumer prices and the distribution of income from different sources.

One of the key components of the model is the determination of household spending, which is expressed as a percentage of income, with its level affected by two components: the share of income from the labor market and the share of income from other sources.

In this section, we consider two groups of households: low-income and high-income households. The impact of changes in income on household spending is examined, with the model suggesting that a decrease in income leads to a decrease in spending, while an increase in income leads to an increase in spending. The model also considers the impact of changes in government welfare payments, such as pensions and unemployment benefits, on household spending. The model also considers the impact of changes in consumer prices and the distribution of income from different sources.

The model also considers the impact of changes in consumer prices and the distribution of income from different sources.

The implications for the current recession are significant. The model suggests that a decrease in income leads to a decrease in spending, while an increase in income leads to an increase in spending. The model also considers the impact of changes in government welfare payments, such as pensions and unemployment benefits, on household spending. The model also considers the impact of changes in consumer prices and the distribution of income from different sources.

2.4 Household Headship Model

An important aspect of the model is the determination of household headship, which is expressed as a percentage of income, with its level affected by two components: the share of income from the labor market and the share of income from other sources.

In this section, we consider two groups of households: low-income and high-income households. The impact of changes in income on household spending is examined, with the model suggesting that a decrease in income leads to a decrease in spending, while an increase in income leads to an increase in spending. The model also considers the impact of changes in government welfare payments, such as pensions and unemployment benefits, on household spending. The model also considers the impact of changes in consumer prices and the distribution of income from different sources.

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TABLE 1

LIST OF DEMOGRAPHIC GROUPS FOR WHICH HOUSEHOLD FORMATION IS DETERMINED IN THE IMPACT PROJECT'S HOUSEHOLD HEADSHIP MODEL

There are sixty-four demographic groups modelled, being all combinations of eight sex/marital status groups and eight age groups as follows:

**Sex/Marital Status Groups**

1. never married males (NM)
2. never married females (NMF)
3. married (including permanently separated) males (MM)
4. married (including permanently separated) females (MF)
5. divorced males (DM)
6. divorced females (DF)
7. widowed males (WM)
8. widowed females (WF)

**Age Groups (In Years)**

1. 15 - 19
2. 20 - 24
3. 25 - 34
4. 35 - 44
5. 45 - 54
6. 55 - 59
7. 60 - 64
8. 65 and over

---

TABLE 13

HOUSEHOLD FORMATION UNDER PRINCIPAL POPULATION PROJECTION AND VARIOUS ECONOMIC SCENARIOS

<table>
<thead>
<tr>
<th>Economic Scenario</th>
<th>Household Headship Ratio (a) 2001 (%)</th>
<th>Household Formation Growth (b) 2001 (a) (%)</th>
<th>Number of Households (b) 2001 (a) (’000)</th>
<th>Percentage Deviation of High/Low from Principal Projection 2001 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>0.4660</td>
<td>2.0</td>
<td>1810.4</td>
<td>6.0</td>
</tr>
<tr>
<td>Medium</td>
<td>0.4398</td>
<td>1.7</td>
<td>1708.5</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>0.4205</td>
<td>1.4</td>
<td>1633.6</td>
<td>-4.4</td>
</tr>
</tbody>
</table>

(a) The percentage point differences for the total headship ratio for high and low economic scenarios were taken from IMPACT's Australian analysis and applied to the medium projection for Victoria in 2001.

(b) The number of households was determined by multiplying the total household headship ratio by the total population.

Source: See Appendix A.
Table 12: HOUSEHOLD FORMATION UNDER MEDIUM ECONOMIC SCENARIO AND VARIOUS POPULATION SCENARIOS

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981 to 2001</td>
<td>7.0%</td>
<td>9.0%</td>
<td>11.0%</td>
</tr>
<tr>
<td>2001 to 2021</td>
<td>9.1%</td>
<td>11.1%</td>
<td>13.1%</td>
</tr>
</tbody>
</table>

Note: The three population scenarios are determined by whether the groups from the medium economic scenario to the low and high economic scenarios are calculated by applying household formation rates by sex and age.
2.5 Summary of the IMPACT Method for Projecting Households

A schematic illustration of the Facility used to generate the household projections reported in this paper is given in Figure 1. We begin with a chosen demographic scenario of future fertility and mortality ratios, and international and internal migration levels, and a chosen scenario for the future of the economy. The demographic scenario and the economic scenario are used by the population projection model to generate projections of the population in each demographic group in each year. The economic scenario is used by the labour force participation model to project labour force participation rates for each demographic group, which feed into the household headship model. The economic scenario also feeds directly into the household headship model, where it influences the average expected income level of each demographic group. The econometric model of household headship determines the headship ratios for each demographic group on the basis of the estimated response of its headship ratio to its average expected income. The population estimates are then combined with these headship ratios to provide estimates of the number of households in each group and for the population as a whole.

The next two sections describe the assumptions required for each part of the Facility.

have assumed that Victorian household headship ratios respond to alternative specifications of the economic scenarios with the same sensitivity as Australian rates.

Without changing the economic scenario and household headship ratios, the impact of alternative population scenarios is shown in Table 12. The high population scenario with 1.6% average annual growth in population between 1981 and 2001 results in 1.9% average annual growth in the number of households. On the other hand, the low population scenario with 1.0% average annual population growth results in only 1.3% growth in the number of households. In 2001, the number of households under the high population scenario is 5.1% higher than the medium projection and under the low population projection is 7.0% lower.

The affect of varying the economic scenario but maintaining the principal population projections is shown in Table 13. The high economic scenario results in average annual growth in number of households of 2.0 per cent over the projection period and the low scenario, 1.4 per cent, compared to the medium projection of 1.7 per cent. In 2001, the high economic scenario effects a 6.0% higher number of households than the medium projection, and the low economic scenario, a lower level by 4.4 per cent.

In general these results indicate that while the major trend in projected household formation growth is determined primarily by population growth, the plausible range of the projected number of households can be influenced significantly by both demographic and economic factors.
3. ECONOMIC SCENARIO

The economic scenario, a medium growth, which was developed by the IMPACT Project Team for its projections of Australian household formation, has been adopted for the current Victorian Projections. That economic scenario is set out in Table 2.

The status of this scenario should be clearly understood. The scenario is in no way meant to be interpreted as an economic forecast of the likely course of the Victorian economy. The scenario is plausible in that none of its components are technically impossible or inconsistent with each other. (It is, of course, true that a more realistic short term scenario could be obtained by using a higher unemployment rate in 1981-82. We are mainly concerned, however, with long term developments in these projections.) Other scenarios (for example, with higher unemployment, or alternatively, faster income growth) may be equally plausible.

One of the major advantages of the IMPACT Facility is that it allows the assessment of the impact of alternative economic scenarios on the course of household formation. Whilst the specification of the economic scenario used in this projection implies a moderate long-term rate of growth in the Victorian economy, it can produce results relevant to an analysis of household formation under other scenarios (for example, a continuation of the current recession). Such analysis is given in Section 7.
The sensitivity of household headship to alternative economic scenarios is also developed two for the economic scenario. Furthermore, the economic scenarios for the Victoria 1991, 1992, and 1993 scenarios.


Population projections by age, sex and marital status have been produced using the IMPACT Facility. In this particular projection, the Facility uses the cohort-component method to project population based on projections of age-specific fertility rates, sex and age specific marriage and divorce rates, and death rates and the size and sex, age and marital status distribution of interstate and overseas migration. These projections of the components of demographic growth were partly determined from assumptions regarding future movements in fertility, mortality and interstate and overseas migration made by the Forecasts Project Team, Department of the Premier and Cabinet, in the production of its principal projection of the Victorian population (as outlined in the discussion paper, Preliminary Population Projections, Victoria, 1981-2001, October 1982). Table 3 contains a summary of the Forecasts Project Team's assumptions.

The age-specific death rates for each sex and the age-specific fertility rates for women adopted for the projections were the same as those for the projections by the Forecasts Project Team, while international movements had the same age profile as for the Forecasts Project Team's assumptions but were disaggregated by marital status at each age in accordance with the marital status proportions of international arrivals and departures into and out of Australia in 1980/81. For interstate migration movements, the age profiles provided by the Forecasts Project Team were disaggregated by marital status at each age in accordance with the marital status proportions of the Australian population in 1980. The econometric model was used with the chosen economic scenario to determine the projections of marriage and divorce rates. Whilst this model was estimated from Australian data, it was assumed that the marriage and divorce behaviour of Australians and Victorians would respond similarly to changes in economic growth. The projections of Victorian marriage and divorce rates produced suggest that:

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 19</td>
<td>7.0</td>
<td>6.3</td>
<td>5.9</td>
<td>5.5</td>
<td>6.4</td>
<td>-0.4</td>
</tr>
<tr>
<td></td>
<td>(0.6)</td>
<td>(0.5)</td>
<td>(0.4)</td>
<td>(0.3)</td>
<td>(0.4)</td>
<td></td>
</tr>
<tr>
<td>20 - 24</td>
<td>13.3</td>
<td>11.5</td>
<td>12.1</td>
<td>11.2</td>
<td>11.8</td>
<td>-0.6</td>
</tr>
<tr>
<td></td>
<td>(1.1)</td>
<td>(0.9)</td>
<td>(0.8)</td>
<td>(0.7)</td>
<td>(0.7)</td>
<td></td>
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<tr>
<td>25 - 34</td>
<td>29.8</td>
<td>38.8</td>
<td>46.2</td>
<td>50.3</td>
<td>51.7</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>(2.4)</td>
<td>(2.9)</td>
<td>(3.2)</td>
<td>(3.2)</td>
<td>(3.0)</td>
<td></td>
</tr>
<tr>
<td>35 - 44</td>
<td>26.8</td>
<td>38.9</td>
<td>48.6</td>
<td>58.5</td>
<td>67.9</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>(2.2)</td>
<td>(2.9)</td>
<td>(3.4)</td>
<td>(3.7)</td>
<td>(4.0)</td>
<td></td>
</tr>
<tr>
<td>45 - 54</td>
<td>28.9</td>
<td>31.4</td>
<td>38.4</td>
<td>49.9</td>
<td>59.2</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>(2.4)</td>
<td>(2.4)</td>
<td>(2.7)</td>
<td>(3.2)</td>
<td>(3.5)</td>
<td></td>
</tr>
<tr>
<td>55 - 59</td>
<td>20.6</td>
<td>21.3</td>
<td>20.2</td>
<td>23.1</td>
<td>27.8</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>(1.7)</td>
<td>(1.6)</td>
<td>(1.4)</td>
<td>(1.5)</td>
<td>(1.6)</td>
<td></td>
</tr>
<tr>
<td>60 - 64</td>
<td>21.6</td>
<td>24.4</td>
<td>24.4</td>
<td>22.7</td>
<td>25.4</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>(1.8)</td>
<td>(1.8)</td>
<td>(1.7)</td>
<td>(1.8)</td>
<td>(1.5)</td>
<td></td>
</tr>
<tr>
<td>65 Plus</td>
<td>92.3</td>
<td>103.6</td>
<td>116.3</td>
<td>128.1</td>
<td>136.9</td>
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<tr>
<td></td>
<td>(7.5)</td>
<td>(7.8)</td>
<td>(8.1)</td>
<td>(8.2)</td>
<td>(8.0)</td>
<td></td>
</tr>
</tbody>
</table>

ADULT FEMALES: 240.3 (19.5) 276.3 (20.8) 312.2 (21.7) 349.4 (22.2) 386.9 (22.6) 2.4

(a) Figures in brackets refer to percentage of total households.
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>7.7%</td>
<td>7.7%</td>
<td>7.7%</td>
<td>7.7%</td>
<td>7.7%</td>
</tr>
<tr>
<td>20-24</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
</tr>
<tr>
<td>25-29</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
</tr>
<tr>
<td>30-34</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
</tr>
<tr>
<td>35-39</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
</tr>
<tr>
<td>40-44</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
</tr>
<tr>
<td>45-49</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
</tr>
<tr>
<td>50-54</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
</tr>
<tr>
<td>55-59</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
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<td>11.1%</td>
</tr>
<tr>
<td>60-64</td>
<td>11.1%</td>
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<td>11.1%</td>
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<tr>
<td>65-69</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
</tr>
<tr>
<td>70+</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
</tr>
</tbody>
</table>

*Figures in brackets refer to percentage of total households.*

*Table 8: Median Projection of Household Proportion by Age.*

*Note: This table shows the percentage of households in each age group as projected from 1996 to 2000.*
### TABLE 3 SUMMARY OF ASSUMPTIONS FOR VICTORIAN STATE PRINCIPAL POPULATION PROJECTION

#### Fertility
Total fertility rate rises from 1920 in 1981-82 to 2110 in 1987-88; and set at 2110 thereafter.

#### Mortality
A 1.5% decline per annum throughout the projection period.

#### Net Interstate Migration (Net Outflow)
- 1981-82: 20,000 persons
- 1982-83: 15,000 persons
- 1983-84 to 1988-89: 0.33% of Victoria's population
- 1989-90 to 2000-01: 0.17% of Victoria's population

#### Net Overseas Migration (Net Inflow)
- 1981-82 to 1983-84: 28,837 persons
- 1984-85 to 2000-01: 0.6% of Victoria's population

---


---

### 6.4 Age

The projected numbers of household heads by age and sex are set out in Tables 8 and 9.

Changes in both the demographic composition of households and in household headship rates reflect the projected levels of household formation.

Ageing of the population is the major influence upon the 2.0 percent average annual growth rate between 1981 and 2001 of male household heads aged 55 years and over.

Projected changes in the State's age distribution account for the 2.6% average annual growth between 1981 and 1991 for male household heads aged 35 to 44 years followed by 3.0% growth among the same cohort then aged 45 to 54 years in the decade 1991 to 2001. In fact, there is actually a decline in the age-specific headship ratios for this group; demographic factors more than compensate for this decline.

The shifts in marital status also influence household formation by age. For example, male household heads in the range 25 to 44 years are projected to have declining headship rates during the projection period, due to a rising proportion in the divorced state, a category with lower headship rates than other marital status categories.

For females, the pattern of growth among older household heads and the middle age cohort referred to above is similar to that for males. However, due to a growing number of unmarried persons (at younger ages) and of divorced persons (whose headship ratios increase throughout the projection period), the growth rates of household heads of all age groups between 25 and 59 years are higher for females than for males.

Changes in the distribution of income also influence the household headship rates across ages. For younger and older age groups, labour force participation rates are projected to fall. These groups then receive a smaller share of total income. Due to the positive correlation between household headship and income the headship rates are lower. As a consequence, the share of income for prime-aged males and females rises accompanied by higher headship rates.
The effects of the demographic and economic assumptions, the errors in fertility and mortality projections, and the assumptions made on the relationship between fertility and mortality are considered to be reasonable but have a potential range of error. These assumptions may be re-estimated based on future data. Therefore, the data presented here must be interpreted with caution.

The table below shows the projection of Victoria's population by age and sex for the years 1991 to 2001.

<table>
<thead>
<tr>
<th>Year</th>
<th>Male Total</th>
<th>Female Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1,723,938</td>
<td>1,723,938</td>
<td>3,447,876</td>
</tr>
<tr>
<td>1995</td>
<td>1,723,938</td>
<td>1,723,938</td>
<td>3,447,876</td>
</tr>
<tr>
<td>1999</td>
<td>1,723,938</td>
<td>1,723,938</td>
<td>3,447,876</td>
</tr>
<tr>
<td>2001</td>
<td>1,723,938</td>
<td>1,723,938</td>
<td>3,447,876</td>
</tr>
</tbody>
</table>

Note: The projection assumes a constant rate of natural increase of 1.0 per cent, which is the rate assumed to occur in 2001.

Population projections are never married. Please from 0.6 per cent. In Table 5, the projection of the population is not presented to resemble the data. This projection is not equivalent to the projections generated by the Queensland Bureau of Statistics.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Males</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-14</td>
<td>500073</td>
<td>520384</td>
<td>603036</td>
<td>0.40 to 1.49 to 0.94</td>
</tr>
<tr>
<td>15-64</td>
<td>1297105</td>
<td>1486447</td>
<td>1672113</td>
<td>1.37 to 1.18 to 1.28</td>
</tr>
<tr>
<td>65+</td>
<td>162874</td>
<td>204531</td>
<td>245216</td>
<td>2.30 to 1.83 to 2.07</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1956052</td>
<td>2211364</td>
<td>2565386</td>
<td>1.21 to 1.32 to 1.27</td>
</tr>
<tr>
<td><strong>Females</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-14</td>
<td>478515</td>
<td>495890</td>
<td>574892</td>
<td>0.36 to 1.49 to 0.92</td>
</tr>
<tr>
<td>15-64</td>
<td>1279744</td>
<td>1452535</td>
<td>1626428</td>
<td>1.27 to 1.14 to 1.21</td>
</tr>
<tr>
<td>65+</td>
<td>239244</td>
<td>253480</td>
<td>342222</td>
<td>2.42 to 1.98 to 2.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1988503</td>
<td>2240903</td>
<td>2543541</td>
<td>1.20 to 1.27 to 1.24</td>
</tr>
<tr>
<td><strong>Persons</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-14</td>
<td>978588</td>
<td>1016274</td>
<td>1177928</td>
<td>0.38 to 1.48 to 0.93</td>
</tr>
<tr>
<td>15-64</td>
<td>2576849</td>
<td>2958982</td>
<td>3298541</td>
<td>1.32 to 1.16 to 1.24</td>
</tr>
<tr>
<td>65+</td>
<td>593118</td>
<td>497011</td>
<td>567458</td>
<td>2.37 to 1.69 to 2.03</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3946855</td>
<td>4452266</td>
<td>5063907</td>
<td>1.21 to 1.30 to 1.25</td>
</tr>
</tbody>
</table>

The demographic composition of households is projected to change over the projection period. The increasing proportion of households headed by females (19.5% in 1981 growing to 22.6% in 2001) is directly related to the projected increased numbers of divorced and never married persons. The pattern of population growth by age leads to an increase in the proportion of households headed by males aged 35 to 54 years - from 32.4% in 1981 to 34.1% in 2001. The remaining groups of males aged 15 - 34 years and 55 years and over both decline as a proportion of the number of household heads.

More disaggregated projections by age and marital status are discussed below.

6.3 Marital Status

The growth of household heads among never married and divorced persons is shown in Table 7. Between 1981 and 2001, the number of households headed by never married persons is projected to grow at an average annual rate of 3.3% per annum, and households headed by divorced persons by 5.0% per annum. Much slower growth rates are projected for traditional groups: married males, 1.1%, and widowed females, 1.3%.

It should be noted, however, that despite lower growth rates, traditional groups still account for a large number of new households formed. Between 1981 and 2001 there is a projected increase of 479.1 thousand households of which 206.3 thousand or 43.1% are headed by married males and 33.8 thousand or 7.1% are headed by widowed females.

**NOTES:**
(a) Persons 0-14 as per cent of persons of working age (15-64 years).
(b) Persons 65+ as per cent of persons of working age.
(c) Persons aged 0-14 and 65+ as per cent of persons of working age.

### Table 6

**Summary of Recent Household Projections**

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>1.35</td>
</tr>
<tr>
<td>1986</td>
<td>1.41</td>
</tr>
<tr>
<td>1991</td>
<td>1.51</td>
</tr>
<tr>
<td>1996</td>
<td>1.63</td>
</tr>
<tr>
<td>2001</td>
<td>1.75</td>
</tr>
</tbody>
</table>

**NOTES:**
- Percentages and new household units are the annual rates or annual averages, and expressed as numbers of households expressed in thousands. Growth rates are calculated as annual averages and expressed as percentages. New households are expressed as percentages of existing households.
- Households Headed by:
  - Less than 31 years old
  - 31 to 55 years
  - 55+ years
- New households in thousands.
cent in 1981 to 27.4 per cent in 2001, while the proportion widowed remains at approximately 7.1 per cent throughout the projection period. However, despite projected increases in remarriage, the projected increase in divorce rates leads to an increase in the proportion divorced from 3.2 per cent in 1981 to 6.1 per cent in 2001 and a decrease in the proportion married from 62.9 per cent in 1981 to 59.4 per cent in 2001.

The important aspects for household formation of the population projections are:

(i) the underlying base of population growth,
(ii) the ageing of the population, and
(iii) the increasing proportion of divorced persons and never married persons, and the corresponding decline of married persons.

6. HOUSEHOLD FORMATION - MEDIUM PROJECTION

6.1 Introduction

The combination of the 'medium' economic scenario (See Section 3) and the 'principal' population projections (See Sections 4 and 5) result in a 'medium' projection of household formation. The term 'medium' is used to distinguish this projection from others to be discussed in Section 7.

6.2 Summary of Results

Under the 'medium' projection, the number of Victorian households increases from 1229.4 thousand in 1981 to 1708.5 thousand in 2001. At an average annual growth rate of 1.7 per cent between 1981 and 2001, the number of households is projected to grow faster than population (1.3 per cent per annum), the difference being explained by the increase in the total household headship ratio. Rising from 41.4 in 1981 to 44.0 in 2001, the household headship ratio increases at an average annual rate of 0.3 per cent. (See Table 6).

Corresponding to the rise in household headship, the size of the average household falls from 3.2 persons in 1981 to 3.0 persons in 2001.

As the number of households increases, demand for new housing and related goods and services can also be expected to increase. The number of new households (net of reductions due to deaths of the elderly etc.) is projected to run at an annual rate of 19.8 thousand for the period between 1981 and 1986 and this rate increases with acceleration in population growth over the remainder of the projection period.