

# WOMEN AND AUSTRALIA'S RETIREMENT INCOME SYSTEM



Siobhan Austen, Therese Jefferson, Alison Preston

Women's Economic Policy Analysis Unit (WEPAU)

Curtin University of Technology



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# **F o r e w o r d & A c k n o w l e d g m e n t s**

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The retirement incomes project as developed by the W.A. Women's Policy Office (WPO), arose from environmental scanning and liaison with other government agencies regarding economic independence for women. In 2000 the WPO appointed Curtin University to develop a broad ranging research report on the current status, options and issues in relation to retirement incomes for women.

This report represents a summary of a larger body of work undertaken by staff at the Women's Policy Office (WPO), the Women's Economic Policy Analysis Unit (WEPAU) and the Institute for Research into International Competitiveness (IRIC) (Austen, Jefferson and Preston 2001). It focuses on the increasing significance of occupational superannuation schemes in the Australian retirement income system and the close linkages between education, employment and time in the workforce with retirement income levels.

We would like to acknowledge the input of everyone who has contributed to the retirement incomes project, in particular Ms Joan Malpass and Ms Linda Richardson from the WPO and, from IRIC, Ms Elisa Birch and Professor Peter Kenyon.

# Women's Economic Policy Analysis Unit (WEPAU)

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The Women's Economic Policy Analysis Unit (WEPAU) is an inter-disciplinary research program that spans two divisions of Curtin University: the Curtin Business School (CBS) and the Division of Humanities. WEPAU was founded in April 1999 in response to a growing void, both within the Australian and international contexts, in the gendered analysis of economic and social policy issues that confront women. As such, WEPAU is committed to producing high quality quantitative and qualitative research on a broad range of issues which women identify as impeding their ability to achieve equity and autonomy. The gender perspective generated through the work of WEPAU has provided a number of key opportunities to inform the policy debates within numerous government departments. WEPAU seeks to further its commitment to providing a meaningful gender analysis of policy through pursuing further research opportunities which privilege women's experiences of social and economic policies within the Australian context. The broad objectives of WEPAU include:

- To identify the cases and causes of women's disadvantaged social and economic status and to contribute to appropriate policy initiatives to address this disadvantage;
- To demonstrate the way in which social factors, particularly gender, influence the construction of economic theory and policy;
- To extend current theory and research by placing women and their social context at the centre of analysis;
- To contribute an interdisciplinary approach to the understanding of women's position in society. In turn, this should enable the unit to better reflect the interrelatedness of the social, economic and political discourses in policy and their consequent implications for women;
- To foster feminist research both nationally and internationally;
- To expand linkages with industry;
- To establish and support a thriving Curtin University post-graduate research community with a common interest in feminist scholarship.

# Author's Notes

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**Dr Siobhan Austen** is co-Director of the Women's Economic Policy Analysis Unit, co-Editor of the *Australian Journal of Labour Economics* and a lecturer within the Department of Economics at Curtin University of Technology. Siobhan's research interests include culture in the labour market (the focus of her PhD thesis from Melbourne University), low paid workers, labour supply, occupational choice, gender equality indicators and inequality. She has published in several leading international journals and Australian based journals, including the *International Journal of Social Economics*, *The Review of Social Economy* and the *Journal of Economic Issues*, and *Journal of Contemporary Issues in Business and Government*.

**Ms Therese Jefferson** is a Research Associate with WEPAU. She was educated at the University of New South Wales and at La Trobe University. After graduation from UNSW she worked in industrial relations in the mining industry in Queensland. Since completing her Masters in Economics at La Trobe, she has participated in research projects at Murdoch University and IRIC and has also tutored in economics at Notre Dame University. She has worked with research teams examining Australian workplace agreements, regional unemployment, industry policy, competition policy, vocational education and training programs and community perceptions of fairness within the context of the Australian economy.

**Dr Alison Preston** is co-Director of WEPAU, co-Editor of the *Australian Journal of Labour Economics* and a Senior Research Fellow with the Graduate School of Business at Curtin University. Prior to completing her PhD in Labour Economics and Industrial Relations at The University of Western Australia, Alison was Director of the Workplace Research Section at the Department of Workplace Relations and Small Business (formerly known as the Department of Industrial Relations) in Canberra. She has diverse research interests including wage determination, income inequality, absenteeism, nurse labour markets, employee participation and retirement income, and has been awarded a number of highly competitive research grants for her work in these areas. Her most recent success includes two Australian Research Council Discovery grants: one (a team grant) to study pay equity and another (an individual grant) to study trends in economic well-being. She has published widely in journals such as *Applied Economics*, the *Economic Record*, *Journal of Industrial Relations* and *Australian Bulletin of Labour* and is author of an authoritative book on Australian wage determination, published in by Ashgate Ltd. in May 2000.

# **Women and Australia's Retirement Income System:**

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## **Executive Summary**

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Siobhan Austen, Therese Jefferson and Alison Preston

A Summary Report by the Women's Policy Analysis Unit, Curtin University, for the W.A. Women's Policy Office;  
January 2002.

Superannuation is now the Commonwealth Government's preferred system for the provision of income in retirement and may be seen by some as a response to the challenges posed by population ageing, declining fertility, fiscal constraints and national savings. Generous taxation concessions have been used to encourage 'self-provision' in retirement and, since the introduction of the Superannuation Guarantee Charge (SGC) in the early 1990s, coverage of superannuation has increased markedly. The government's stated objective in introducing the SGC was to encourage the private provision of retirement incomes as a way of reducing reliance on the means-tested age pension.

Ten years after the introduction of compulsory superannuation, twenty-five per cent of the pre-retired population are still without superannuation. Of those who do have coverage median balances are low, equal to around \$13,400 for men and \$6,400 for women. Using micro-simulations this report examines how well men and women might expect to fare under a fully-matured mandatory superannuation system.

The research shows that, while the SGC and taxation provisions offer the opportunity for many to achieve a modest private retirement income in the future, it remains the case that the 'maximum labour force attachment model' underpinning this retirement income system is gender biased. Although the system does not directly discriminate against women, in as far as there are no provisions specifying that women may not access particular aspects of the retirement income framework, a woman's capacity to perform within the system is significantly constrained by:

- their traditional roles as 'wife and mother', which may result in financial dependence on a partner;
- broken work patterns; and
- their concentration in low paying jobs, many of a part-time/casual nature.

Even women with strong levels of labour market attachment will struggle to accumulate a private annual income stream greater than the minimum amount need to retire on, currently equivalent to around 25 per cent of male average total weekly earnings. Baby-boomers will retire with substantially lower nest-eggs and will remain heavily dependent on government pensions.

**The report is designed to stimulate debate and discussion** and, as such, is predominantly concerned with superannuation (given the latter's importance within the current retirement income framework). Our research suggests the the following:

- Gender wage differences mean women accumulate less superannuation;
- Migrants from non-English speaking countries and indigenous people earn significantly lower wages and thus accumulate significantly lower superannuation than their non-indigenous Australian born counterparts;
- Periods of workforce absence have a disproportionately negative impact on superannuation savings;
- Part-time employment reduces superannuation accumulation;
- Marginal attachment leads to very low superannuation accumulation;
- Occupation of employment is an important determinant of superannuation savings;
- Gender differences in the rates of return to occupation, education and experience are sources of inequity in pre- and post-retirement incomes;
- Delaying childbirth can increase accumulated superannuation, although the effect is smaller for less qualified women and those in low paid/status jobs;
- Rural women and, indigenous women in particular, have above average levels of fertility and higher wage gaps relative to their metropolitan counterparts. Their capacity to accumulate superannuation is, thus, significantly lower;
- Paid maternity leave enhances gross lifetime earnings and has an even greater effect on superannuation (as a result of compound interest effects);
- Removal of the \$450 per month earnings rule for SGC eligibility would deliver significantly higher levels of superannuation for women who earn below this threshold amount;
- Increasing compulsory contributions would raise superannuation accumulations, although the greatest benefits of this policy would flow to high income earners and thus further exacerbate inequality in retirement;
- Removing the tax on employer's contributions would have a similar effect to that of increasing contributions;

The policy discussion presented in the report highlight a need for greater public debate over government policy with respect to the whole retirement income system. Current retirement policy, with its emphasis on superannuation, is poorly targeted and does little to assist low income earners, the majority of whom are women. Data illustrate women's historic dependence on both government and intra household transfers as sources of income in their retirement. An assessment of current institutional arrangements demonstrates structural barriers to the successful participation by many women in the current framework of occupational superannuation.

# 1 . I n t r o d u c t i o n

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Since the mid 1980s there has been a policy shift towards extended private superannuation coverage for a broad group of labour market participants. Minimum compulsory employer superannuation contributions are now provided for under the *Superannuation Guarantee Charge (SGC) Act 1992*. Generous taxation concessions have also been used to encourage and promote private contributions to superannuation schemes<sup>i</sup>. It is widely believed that the combined effect of these policies will be a reduction in reliance on the government provided, means-tested, age pension.

While the SGC and taxation provisions do offer an opportunity for many retirees to achieve an increased income in retirement, occupational superannuation, by definition, benefits those with a strong labour market attachment. Those outside the labour market or with a weak attachment to the workforce are likely to be most disadvantaged by the arrangements. In this respect the framework underpinning the government's current retirement income system is gender biased. A woman's capacity to secure an adequate retirement income within an occupationally based system is significantly constrained by her traditional role as 'wife and mother' which, for many, results in financial dependence on a partner, broken work patterns, and employment in low paying jobs, often of a part-time/casual nature.

In this report we use micro-simulations to study labour participation patterns and examine how different groups of women could be expected to perform under a fully matured compulsory superannuation system. Our key findings suggest that a typical woman, even with strong levels of labour force attachment, will struggle to achieve a private income substantially different from that available under the Age Pension. The majority of women will, therefore, remain highly dependent on the Age Pension in later life.

We acknowledge that Australia's retirement income system has three main 'pillars' or strands: the age pension which is a means tested, flat rate, non-contributory payment funded from government general revenue; private occupational superannuation (which consists of compulsory and voluntary contributions); and other private savings (eg. property investment). Our interest in superannuation within this report is reflective of the importance accorded to this pillar by current government policy.

The report is organised as follows. Chapter 2 provides a brief introduction to the retirement income system and examines superannuation coverage within Australia. Chapter 3 outlines the typical circumstances of women that impact on their ability to accumulate resources for retirement. In Chapter 4 vignettes of typical and atypical life-courses are presented and used to illustrate how levels of superannuation accumulated vary across different labour market groups. In Chapter 5 we discuss some policy options which could make occupational superannuation more accessible to those with low incomes and/or broken work patterns. Chapter 6 provides a summary and conclusion to the report.

# 2. Forms of Retirement Income in Australia

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The Australian retirement income system is comprised of three main components:

- The age pension, financed by general tax revenue;
- Occupational superannuation schemes, largely financed through mandatory employer contributions to superannuation funds, but also supported by the government through concessionary tax arrangements and rebates; and
- Other forms of private savings such as investments in property and shares.

Access to the aged pension and superannuation payments are more closely related to age than other forms of income such as investment income, wages and salaries and business earnings. For that reason, the focus of this report is upon the categories of government transfer payments and superannuation and their impact on women's retirement incomes.

## **FORMS OF RETIREMENT INCOME: THE AGE PENSION**

The age pension was first introduced in Australia in 1909 in response to destitution among the aged. It developed as a transfer from general taxation revenue rather than being based on income-related contributions made to individual accounts during a person's working life. In the early 1900s life expectancy at birth was 55.2 years for men and 58.8 years for women. The demand for the age pension was, thus, expected to be low (Beal and Mc Keown, 2001).

Currently, eligibility for the age pension is governed by an asset test as well as age and residency criteria ii. Men aged 65 years old with 10 or more years of continuous residency in Australia are eligible for the age pension. Prior to 1995, women could qualify for the age pension from the age of 60. The minimum qualifying age for women is being increased by six months at two-year intervals until 2013, when it will be 65 years. To receive the age pension, men and women must qualify for the pension in their own right iii.

Age pension rates are currently indexed to male average total weekly earnings (MATWE) and are adjusted biannually. The maximum single rate of pension is equal to 25 per cent of the MATWE for singles and, approximately, 40 per cent of MATWE for couples. Recipients do not pay income tax on the age pension and may qualify for supplementary payments on top of their basic pension. The two main supplementary payments in Australia are the pharmaceutical allowance and rent assistance.

## **FORMS OF RETIREMENT INCOME: OCCUPATIONAL SUPERANNUATION**

Prior to the early 1980s occupational superannuation coverage was essentially confined to male professionals, managers and public servants. Significant expansion of the system to other occupational groups occurred during the Accord era of the 1980s when superannuation provisions were incorporated into industrial awards and superannuation was used as a means of granting (deferred) wage increases while, at the same time, avoiding contributing to inflation. Following the introduction of the *Superannuation Guarantee Charge Act 1992*, superannuation arrangements were further extended. Under this Act employers have to make a minimum contribution to an approved superannuation scheme on behalf of employees.

Currently, in the majority of cases, employers contribute 8 per cent of their employees' earnings to an approved superannuation scheme. This rate will rise to 9 per cent in 2003. However, a number of individuals are not covered by the SGC legislation, including:

- Individuals who are paid less than \$450 per calendar month iv.
- Individuals who are in paid employment and are aged over 70 years old.
- Individuals who are under the age of 18 and who do not work more than 30 hours a week.

Self-employed workers are not covered by the SGC and must rely on private superannuation contributions.

There are also upper limits on the amount of superannuation contributions that an employer can pay into a worker's superannuation fund (for example, under an enterprise bargaining agreement)<sup>v</sup>. The maximum quarterly superannuation contribution base for income generated in 2000-2001 is \$26,300 (ATO 2000).

## **FORMS OF RETIREMENT INCOME: CURRENT INCOME DISTRIBUTION PATTERNS**

Under the current retirement framework, retired men and women have quite different levels of average income and, to some extent, obtain their income from different sources. Estimates based on the 1996/97 Income Distribution Survey show that in 1995/96 the average annual income for a woman aged 55 or over was 42 per cent lower than the average annual income for men aged 55 or over (see Table 2.1). In addition, metropolitan populations tend to have higher retirement incomes than their rural counterparts.

**Table 2.1****Annual Average Income of Women Relative to Men (%), for Selected Australian Population Groups, 1995/96**

	<b>GENDER RATIO</b>	<b>METROPOLITAN GENDER RATIO</b>	<b>RURAL GENDER RATIO</b>	<b>RURAL/METROPOLITAN WOMEN INCOME RATIO</b>
<b>AUSTRALIA</b>	%	%	%	%
Average (55+)	57	54	61	96
<b>WA</b>				
Average (55+)	58	56	58	69

Source: ABS Income Distribution Survey 1996/97.

The aggregate income of the retired population comes from a range of sources. Government transfers, most notably the aged pension, have historically been a significant source of retirement income and continue to dominate statistics on retirement incomes. Table 2.2 shows that, around 65 per cent of men aged 65 or more, and 72 per cent of women aged 60 or more, state that their principal income is from government transfers.

**Table 2.2****Principal Source of Annual 1995-96 Income by Gender and Age**

<b>AGE AND GENDER</b>	<b>GOVERNMENT TRANSFER PAYMENTS</b>	<b>PROPERTY INVESTMENT</b>	<b>SUPERANNUATION</b>	<b>WAGE &amp; SALARY</b>	<b>OWN BUSINESS /OTHER</b>
	%	%	%	%	%
Women over 60	72.0	15.8	4.7	4.1	3.3
Men over 65	65.1	14.5	12.1	4.5	3.8

Source: ABS Income Distribution Survey 1996/97.

While the most common form of government transfer is the aged pension, paid to about 1.5 million people, the veteran's and disability pensions are also important sources of income for a minority of people (ABS Cat. No. 4109.0 1999, p. 80). Other transfers include a pharmaceutical allowance, which is received by all pensioners and rent assistance, which is received by approximately 15 per cent of pensioners. Non-cash benefits include subsidised rents for public rental housing, access to public health care and various state concessions such as discounts on utility bills, local government rates and motor vehicle registration.

In 1995/96, 12.1 per cent of men and 4.7 per cent of women nominated superannuation as their main source of income. This is likely to reflect the historical availability of superannuation in predominantly white-collar, professional occupations in which men are employed in relatively high proportions.

Since the introduction of the SGC the extent and pattern of superannuation coverage has changed considerably. For example, in 1990, 61.5 and 55.7 per cent of men and women employed full-time were covered by superannuation schemes. By 2000, the corresponding shares had increased to 91.2 and 93.1 per cent, respectively. Full-time workers, not surprisingly, have the highest rates of superannuation coverage, and those outside the labour force, the least (see Table 2.3).

**Table 2.3**

**Pre-Retired Persons without superannuation coverage, by labour force status, 2000.**

	<b>MALES</b> %	<b>FEMALES</b> %	<b>PERSONS</b> %
<b>Employed</b>			
Working FT	8.8	6.9	8.2
Working PT	37.8	24.1	27.7
Total	12.4	14.6	13.3
<b>Unemployed</b>	52.0	58.2	54.6
<b>Not in the labour force</b>	75.4	66.8	69.8
Total	21.8	28.6	25.0

ABS Cat. No. 6360, Table 2. \*Pre-retired consists of those currently working and those who intend to work in the future, whether or not they were currently looking for work. Of men aged between 15 and 69, 89% are in the pre-retired population. The corresponding share for women is 80%.

The growth in superannuation coverage is expected to produce substantial changes in the sources of retirement income relied on by retirees. It is expected that a large proportion of future generations of older Australians will be less reliant on the age pension and more able to self-fund, partly or fully, their retirement income needs (DFaCS, 1999).

However, recent ABS statistics on the financial characteristics of those with superannuation show that, although coverage rates have increased significantly, the median funds in superannuation accounts are low (equal to \$13,400 for males and \$6,400 for females) (ABS, 6360, 2000, p.4). Indeed, data in Table 2.4 shows that 44 per cent of women with a superannuation account (and a balance that could be determined), had less than \$5000 in their account. Other groups with less than \$5000 in their superannuation account include part-time workers (53.2 per cent), persons without leave entitlements (casuals) (65.6 per cent), the unemployed (65.1 per cent) and those not in the labour force (56.2 per cent). It is also noteworthy that 50 per cent of women who have either retired, or will retire in the next 10 years, have less than \$20,000 in superannuation; 20 per cent have less than \$5000.

**Table 2.4****Pre-Retired Persons with superannuation coverage, total superannuation balance by gender and labour force status, 2000.\***

	<b>\$1-\$4999</b> %	<b>\$5000-\$9999</b> %	<b>\$10,000-\$19,999</b> %	<b>\$20,000-\$39,999</b> %	<b>\$40,000 +</b> %
Females	44.0	17.5	15.6	10.0	12.9
Females Aged					
15-24	93.1	6.9	*	*	*
25-34	45.2	23.5	18.5	8.1	4.7
35-44	39.1	17.7	17.3	10.7	15.1
45-54	23.9	19.4	18.7	16.2	21.8
55-69	19.4	11.0	20.0	16.0	33.7
Males	29.2	13.8	16.3	14.0	26.7
Employed Full-Time	27.5	15.1	18.0	14.4	25.0
Employed Part-Time	53.2	16.7	12.1	7.3	10.8
With leave entitlements	28.1	15.6	18.3	14.0	24.0
Without leave entitlements	65.6	15.3	8.9	4.5	5.7
Unemployed	65.1	11.6	10.5	4.2	8.6
Persons not in the labour force	56.2	16.8	10.6	7.4	9.0

The data are derived from ABS Cat. No. 6360, Table 9. \* The population is comprised of those with a superannuation account and a balance that could be determined (around 16.4 per cent could not determine their balance). Data on women, disaggregated by age are from unpublished statistics purchased from ABS Cat. No. 6360.

Given the above statistics, a key concern for the remainder of this paper is whether or not the shift towards a retirement income system centred on occupational superannuation (or 'self-funded' retirement) is a gender-neutral policy shift. In particular, we are interested in understanding and demonstrating women's limited capacity to make private provision for retirement, even within the context of a fully-matured system which provides compulsory employer contributions.

# 3. Women's Pre Retirement Lives and Earnings

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As previously noted, occupational superannuation is now widely viewed as a key component of men's and women's retirement income. The age pension has been re-constructed as a safety net arrangement, rather than a universal right of citizenship and rhetorical terms such as 'independent retirees' and 'self-provision' further emphasise the growing distinction between the two systems (Kelly 1997, p.74).

A number of individual-specific factors affect the level of retirement income that a person can accumulate through superannuation and other forms of savings. These factors are largely related to the individual's lifetime earnings stream, as superannuation and other savings are typically proportional to individual earnings. They include all the key determinants of lifetime earnings, such as participation in the paid workforce, hours of work, occupation, education and discrimination.

This section outlines the typical circumstances of women that impact on their ability to accumulate resources for their retirement. The initial discussion focuses largely on alternatives available to individuals. However, many women and men plan their retirement income in the context of a marriage or other partnership and the choices this creates for them are considered later in this section.

## **WOMEN HAVE LOWER LABOUR FORCE PARTICIPATION RATES**

Women's participation rates are closely linked with their roles in unpaid household work, particularly child rearing. Upon bearing children, women tend to experience absences from the labour force for varying periods of time and in many cases, re-enter the labour force on a part-time basis. In some cases women withdraw from the labour force completely (Rosenman and Winocur 1998).

The level of an individual's retirement income is both directly and indirectly related to their labour force participation. The direct linkage is due to the need for individuals to be in paid work to be entitled to employer provided superannuation and because access to a regular income enhances a person's ability to save for their retirement. The indirect linkage is due to the negative effect broken employment patterns have on an individual's current income and future earnings capacity (e.g. through skills atrophy, reduced promotional opportunities and reduced access to training) and, thus, levels of superannuation contributed and savings.

Over the last decade, the percentage of all women participating in the labour market has been gradually rising. As shown in Table 3.1, in September 2001, women in Australia had a workforce participation rate of 55.3 per cent, significantly lower than corresponding male participation rate of 72.4 per cent.

**Table 3.1**

**Participation Rates for Females and Males in Australia, September 1991, 2000 and 2001 (%)**

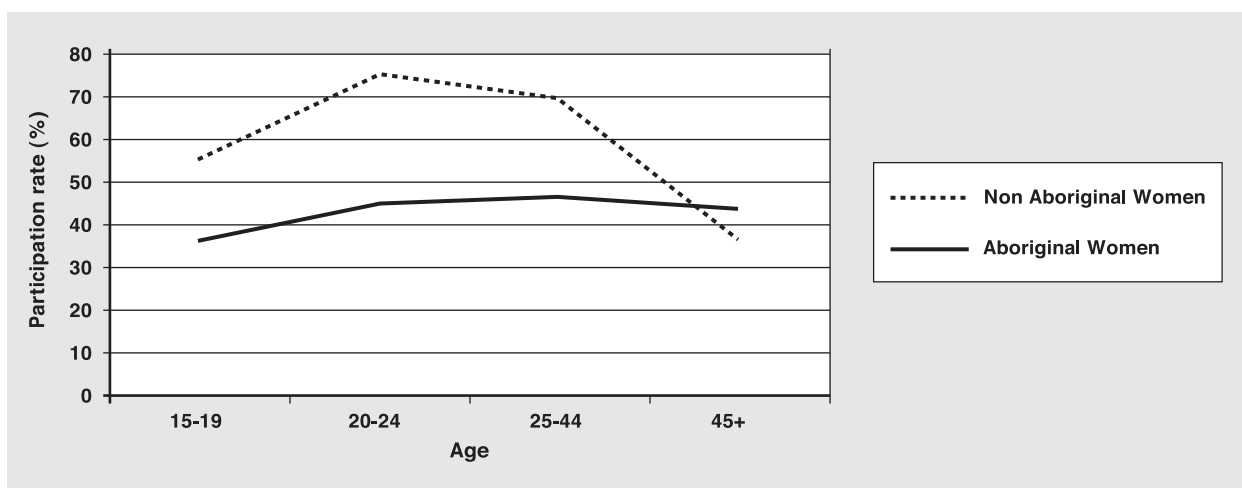
	SEPTEMBER 1991	SEPTEMBER 2001	SEPTEMBER 2000
Female participation in Australia	51.8	55.0	55.3
Male participation rate in Australia	74.4	72.7	72.4
Persons participation rate in Australia	62.9	63.7	63.7

Source: ABS Catalogue 6202, July 2001 (preliminary estimates, subject to revision)

In summary, women's relatively low participation rates reduce life time earnings and the capacity to save funds for retirement. However, it is important to note that labour force participation varies between women according to their age, marital status, ethnicity and place of residency. For example, in 1996 aboriginal women had a participation rate of 39.4 per cent compared with 57 per cent for all women. Therefore, among the population of women, there are particular groups in the community with a very low ability to save for their retirement.

**Figure 3.1**

**Labour Force Participation Among Aboriginal and Non-Aboriginal Women in Western Australian, August 1996**



## **WOMEN PERFORM FEWER HOURS OF PAID WORK**

Part-time employment and its associated 'part-time earnings' reduce potential levels of private savings (either through superannuation or other forms of investments) by individuals and, in turn, lower levels of private individual income in retirement. Further, if earnings are below \$450 per month, an individual is ineligible for compulsory employer SGC superannuation contributions. This is particularly important for women as 44.7 per cent of employed women in Australia work on a part time basis. However, it is becoming relevant for men who are increasingly working part time: in September 1991 9.3 per cent of employed men worked part time, compared with 14.5 per cent in September 2001 (ABS, September 2001).

The \$450 cut-off point has a disproportionate impact on women who are often in low paid occupations and/or in part time employment. Table 3.2 shows the relatively high prevalence of part time work among women and the increasing levels of part time employment for men. Further to this, estimates from the ABS show that at May 1999 around 8 per cent of women and 3.7 per cent of men had total incomes of less than \$400 per month (ABS Cat. No. 6310.0, May 1999).

Part time employment also varies between different groups of women. It is generally undertaken at higher rates by married women and women living in rural areas. Women with family commitments are especially likely to have restrictions on the hours of paid work they can undertake. For mothers, the incidence of part-time employment is highest during the pre-school years (0-4 years), when it reaches rates of over 60 per cent for both single mothers and mothers in couple families (ABS Catalogue 6224.0 June 1999).

## **WOMEN RECEIVE LOWER WAGES**

The level of retirement savings by women is also affected by the considerable gender differences in average earnings. Women's employment tends to be concentrated in industries and occupations which have lower levels of wages and, as shown in Table 3.3, women employed full time in Australia earn around 17 per cent less per week before adjustments are made for other skill and demographic characteristics known to affect earnings. There is no occupational category in which women earn more than men.

**Table 3.3****Average Weekly Total Earnings By Occupation for Full Time Adult Employees(a) and All Employees, Australia, May 2000**

OCCUPATION	FULL TIME ADULT EMPLOYEES			ALL EMPLOYEES (FULL-TIME AND PART-TIME)		
	WOMEN \$	MEN \$	WOMEN'S/MEN'S	WOMEN \$	MEN \$	WOMEN'S/MEN'S
			EARNINGS %			EARNINGS %
Managerial and Administrators	1,145.80	1,355.80	84.5	1,078.00	1,315.30	82.0
Professionals	908.00	1,086.00	83.6	725.50	1,000.30	72.5
Associated professionals	734.50	909.80	80.7	640.00	869.00	73.6
Tradespersons and related workers	584.80	798.20	73.3	431.50	723.90	59.6
Advanced clerical and service workers	669.30	799.20	83.7	566.20	739.10	76.6
Intermediate clerical, sales and service workers	626.00	754.20	83.0	458.70	623.40	73.6
Intermediate production and transport workers	582.80	789.90	73.8	413.60	711.90	58.1
Elementary clerical, sales and service workers	560.90	682.00	82.2	303.80	431.10	70.5
Labourers and related workers	564.40	695.30	81.2	329.80	531.20	62.1
All occupations	731.50	902.70	81.0	520.60	780.20	66.8

Source: ABS Cat. No. 6306.0, May 2000. Note: (a) is the total earnings for full time employees therefore including overtime and bonuses

## RURAL AND INDIGENOUS WOMEN ARE AT AN EARNINGS DISADVANTAGE

Table 3.4 details the inter-regional wage differentials for women throughout Australia and illustrates the variations in earnings capacity between women in different geographic locations. Women in Lower North NSW are well paid and women in Queensland (excluding Brisbane and Far North Queensland) are poorly paid. Females in the former earn 15.3 per cent more than the overall average. Females in the latter earn 17 per cent less than the overall average. The differentials are highly dispersed (Preston, 2001).

**Table 3.4**

### Inter-regional wage structure, for women in Australia, 1996

REGION	% OF WOMEN'S MEAN OVERALL WAGE
Lower North NSW	115.3
Inner Sydney	113.4
Northern/Australian Capital Territory	111.4
Inner Melbourne	106.7
Western Outer Melbourne	104.3
Sutherland and Liverpool	102.4
Outer South West NSW	101.7
Brisbane	98.9
Perth	98.1
East Outer Melbourne	97.7
Adelaide	95.9
Hunter and Illawarra	95.5
Moreton	92.4
Tasmania	91.6
Far North Queensland	91.0
Mallee Area	89.6
Wester Australia (excluding Perth)	89.4
Murrumbidgee Area	87.9
Goulburn, Gippsland	87.2
Richmond and Tweed	86.8
South Australia (excluding Adelaide)	83.6
Remainder Queensland	83.0

Source: Preston 2001

Earnings also vary between women with different characteristics. One group that is particularly disadvantaged in society is the indigenous population. Daly and Hawke (1995) report that, despite increases in the relative wage rates of indigenous Australians, their income levels remain significantly lower than the Australian average. For example, in 1996

the median weekly income (from *all sources*) for indigenous people was \$218 equivalent to 74 per cent of the median income for the total population of \$294. For employed indigenous people, the median income was \$366, 25.6 per cent lower than the median income of all employed people \$492 (ABS Cat. No. 2034.0, 1996).

## **HOUSEHOLD EARNINGS ARE IMPORTANT TO WOMEN'S ACCESS TO INCOME**

Thus far the discussion of the various circumstances of women has focused on outcomes at the individual level. However, many women and men plan their retirement income in the context of a marriage or other partnership.

Many marriage relationships feature a division of paid and unpaid work between the marriage partners. In these relationships one partner, typically the husband, participates in the paid workforce more than the other partner, and thus, contributes a larger share of the family's income needs. The other partner, typically the wife, invests more time in catering for the family's other needs (such as childcare, age-care, meal preparation and housework) resulting in limited involvement with the paid workforce. The division of work results in superannuation assets being accumulated under the name of one partner, perhaps with the hope that it will be shared equally upon retirement.

Married partners who participate equally in paid and unpaid work may also contribute in different ways to the family's long and short-term financial needs. For example, one partner in the marriage may forgo contributing to their own superannuation funds and, instead, devote earnings to household expenses (Owen, 1984). This, in turn, enables the other partner to place a greater proportion of their income into superannuation. Taxation arrangements that deliver the greatest benefits from additional superannuation contributions by high-income earners can foster such arrangements.

In both of the above types of marriage relationships, the individual's retirement income is affected by her partner's superannuation and other savings, and by the division of financial assets within the family. The individual may influence the level of these savings via the contribution she makes to her partner's career and income earning potential (for example when she caters for family and household needs). However, her ability to access a share of these savings is dependent on the power relationships within the household and on the legal structures that affect the division of assets at the time of divorce and death.

Numerous studies have found that women who are divorced are particularly vulnerable to low retirement incomes (see, for example, Dewar, Sheehan and Hughes, 1999; Doyle and Piggott, 1998; and Horin, 2000). Divorced women generally have similar labour force characteristics as married women and, therefore, do not generate large individual levels of superannuation and other savings. Legislation was recently passed by the federal parliament to allow superannuation to be considered as an asset to be taken into account when assets are distributed during divorce proceedings.

The significance of this legislation is illustrated by the information in Table 3.6 which lists the expected sources of retirement income for men and women. The data show that, in 1994, 38 per cent of retired women and more than one in five women intending to retire, stated that their main source of income would be from another's income.

**Table 3.6**

**Expected main source of income at retirement – Retirees and intending retirees aged 45 years or over, Australia, 1994**

EXPECTED MAIN SOURCE OF INCOME	MEN		WOMEN	
	RETIRED %	INTENDING %	RETIRED %	INTENDING %
Superannuation	15.5	38.5	5.2	22.3
Social Security pension, Veteran's pension, other social security.	50.1	43.6	34.4	34.6
Business, property	2.8	3.9	2.0	3.6
Other investment	11.3	11.9	6.0	8.8
Savings, asset sales	9.8	3.6	6.2	3.4
Part time work	4.4	5.3	7.4	4.8
Other's income	4.3	2.7	38.1	22.1
Other	1.8	0.3	1.3	0.3

Source: Australian Bureau of Statistics, Retirement and Retirement Incomes, Australia 1994. Catalogue 6238.0.40.001, as reproduced in King, A. H. Bækgaard, and A. Harding, "Australian Retirement Incomes" Discussion Paper no 43, NATSEM, Canberra, August 1999.

**WOMEN LIVE LONGER AND LONGEVITY IS PROJECTED TO INCREASE**

On average, women live longer than men. Australian men and women who reach 65 may expect, on average, to live for another 16.6 and 20.2 years, respectively. This is significant for women because any superannuation nest egg or income flow from a private source must be spread over a longer period after retirement. Similarly, changing life-expectancy rates also affect available retirement income.

**WOMEN'S PRE RETIREMENT LIVES AND EARNINGS: SUMMARY**

There are a number of important, inter-related labour force and demographic characteristics of Australian women that impinge on their ability to achieve a secure and sufficient retirement income within a system where increasing emphasis is placed on self-funded retirement. Provision for retirement is now critically dependent on occupation (and, related to that level of education and returns to education), employment and time in the workforce. Women's family responsibilities are shown to directly impact on all three identified components of success. They can affect occupational choice decisions, with many women in highly feminised occupational areas which have lower rates of pay. Family responsibilities also affect participation rates, working hours and opportunities for employer provided support for education and training, all of which have implications for both life time earnings and the ability to save for retirement.

# 4. Accumulating Superannuation Entitlements

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In this section,<sup>vi</sup> a micro-simulation approach is used to demonstrate the linkages between women's patterns of paid work and their superannuation savings under the current set of legislative provisions. The simulation exercise estimates the probable lifetime earnings of a number of typical individuals and, from this computes the associated lump-sum and retirement private pension (derived from the purchase of an annuity) they can expect. Comparisons are drawn between the estimates of the retirement incomes of men and women and between women with different degrees of attachment to the paid workforce. The different estimates serve to emphasise many of the issue raised previously, including the importance of education, occupation of employment, hours of employment as well as timing and length of exits from the paid workforce, in a retirement income system where there is an emphasis on occupational superannuation.

## **ACCUMULATING SUPERANNUATION ENTITLEMENTS: DATA AND APPROACH**

Estimates of the amount of savings that a person could accumulate under particular occupational superannuation arrangements require data on the lifetime earnings of the person, information on the proportion of income devoted to superannuation at different stages of the person's working life and estimates of rates of return on these investments net of taxes, fees etc. As will be shown below, each of these prerequisites raise issues about appropriate sources of data and the use of these data to forecast future outcomes for individuals with different economic, social and demographic characteristics.

Estimation of lifetime earnings for the purposes of this micro-simulation exercise basically involves identifying patterns of earnings across the careers of individuals with different characteristics. Longitudinal data, which trace the experience of individuals over extended periods of time, would be ideal for such a purpose. However, such data are, as yet, unavailable in Australia and, thus, alternative approaches to this part of the estimation problem must be sought.

We derive estimates of lifetime earnings using data from the ABS 1996-97 *Income Distribution Survey* (IDS96). The procedure involves three steps. First we identify the average annual 'starting' salaries of a typical young person (aged 20) who works full-time (35 hours or more per week), resides in a metropolitan area and was born in Australia.<sup>vii</sup> In 1996 the average annual wage for such a person was \$20,997. The starting salaries of men are inflated by 10.5 percent to take account of current gender-based wage differences.<sup>viii</sup>

In the second stage of the estimation process, the IDS96 data set is used to generate a set of separate wage equations for men and women employed full-time. In these models we control for level of education, years of potential labour market experience, birthplace, marital status, presence and age of dependent children and thus derive estimates of men's and women's earnings and how these are affected by labour market experience.<sup>ix</sup>

The coefficient estimates on labour market experience from these models are used in the third stage of the estimation process to generate a set of age-earning profiles for men and women employed full-time.<sup>x</sup> We do this by combining the coefficient estimates on the experience variable from the earnings equations with the information on estimated average starting salaries (\$20,997 for women and \$23,203 for men). The resultant profiles are shown in Table 4.1.<sup>xi</sup> By discounting the projected earnings figures by a factor of 24/38.5 (the common ratio of part - time to full-time hours) we are able to estimate the level of part-time earnings of women at different ages (see column 5 of Table 4.1).<sup>xii</sup>

**Table 4.1**

**Estimated Average Annual Earnings, Disaggregated by Age, Sex and Labour Force Status 1996-97**

<b>AGE RANGE</b>	<b>MEN (EMPLOYED FULL-TIME) \$</b>	<b>WOMEN (EMPLOYED FULL-TIME) \$</b>	<b>GENDER WAGE RATIO (FULL-TIME) %</b>	<b>ESTIMATED PART-TIME EARNINGS FOR WOMEN \$</b>
20-24	24788	22522	91	14039
25-29	28825	26105	91	16273
30-34	32282	29056	90	18113
35-39	34809	31045	89	19353
40-44	36129	31830	88	19842
45-49	36083	31307	87	19516
50-54	34667	29528	85	18407
55-59	32030	26697	83	16643
60-64	28452	23131	81	14419

Importantly, this estimation procedure can be repeated for particular sub-groups in the population to identify a range of different experience-earnings profiles. For example, the regression analysis can be restricted to individuals with higher levels of qualifications. The models can also be estimated to identify the earning profiles for, say, migrant women and women who live in rural areas.

We believe that this approach to estimating a lifetime earnings profile is the best available and enables us to maximise the value of the information on the individual characteristics that affect earnings in the IDS96 data set. However, we do acknowledge several limitations that still exist. First, using one year's survey data to estimate lifetime earnings requires that assumptions are made about the rate of earnings growth over time. We assume that the real rate of earnings will remain constant at 1996 levels. We also assume the absence of any productivity growth (e.g. associated with growth in overall levels of GDP). Thus, any observed earnings growth over time has been entirely attributed to the effects of enhanced skills and knowledge (as reflected in length of labour market experience). In reality, the future pattern of wage growth may be different from this scenario.<sup>xiii</sup> A second limitation is that our calculations are based on gross wage rates. No allowance has been made for the personal income tax rates that apply to people with different income levels. This feature of the estimation process will tend to overestimate the level of earnings inequality, for example, between men and women. However, as superannuation contributions are based on gross income, the distortion caused to comparisons of superannuation savings will be minimal. Third, the estimates are based on an assumption that current rates of return to labour market attributes such as experience will remain constant over time. This also may not be true and, as a result, actual levels of earnings and superannuation savings may differ from those predicted here.

## **MODELLING SUPERANNUATION ACCUMULATION**

As mentioned above, the amount of superannuation savings that a person accumulates by the time of retirement will be a function of lifetime earnings, the proportion of income devoted to superannuation over the working life and the rate of return on these savings. Thus, to estimate the level of superannuation savings that a person with particular characteristics accumulates, we combine the above estimates of lifetime earnings with several assumptions about the nature of and returns to each person's superannuation savings. These assumptions, which are based on current regulatory arrangements and rates of return, are as follows:

- Contributions to superannuation savings comprise only the minimum amounts mandated by the SGC.<sup>xiv</sup> The SGC will be fully phased in by July 2002, at which time the rate of compulsory contributions will be set at 9 per cent.
- Earnings in the superannuation funds accrue at a real rate of interest of 3.25 per cent per annum.<sup>xv</sup>
- A 15 per cent tax is levied on contributions. No allowance is made for a superannuation surcharge or other taxes (including taxes on retirement income).
- The preservation age for women and men is 65 years.
- Women re-entering the workforce after career breaks commence at the hourly rates they were on before leaving employment.

Factors relating to these assumptions are applied to our estimates of earnings to generate predictions about the level of superannuation savings of Australian men and women.

## **VIGNETTES: PORTRAYING LIFE-COURSES AND SUPERANNUATION ACCUMULATION**

To simplify the description of the effects of wage rates and working patterns on superannuation savings we define five stereotypical people and identify their expected lifetime earnings and superannuation accumulation at age 65. Each of these hypothetical people was born in Australia and resides in a metropolitan area. They include:

### **John**

John has an average level of education, enters the workforce at the age of 20 in 2000 and works continuously on a full time basis until he reaches the age of 65.

John can expect to have lifetime earnings of **\$1,440,000** and to accumulate superannuation worth **\$233,000**.

### **Tracey**

Tracey also has an average level of education and enters the workforce at the age of 20 and works continuously for 65 years.

Tracey can expect lower average levels of income than John and, in turn, can expect to have lifetime earnings of **\$1,256,000** and to accumulate superannuation worth **\$206,000**.

### **Sandra**

Sandra has the same level of education and age of entry to the labour market as Tracey. However, her workforce history differs in that she *withdraws from the workforce* at the age of 27 to have her first child and remains out of the workforce until she is 34 (and her second child is five years old). Sandra *returns to work on a full-time basis* and does not retire until she is 65.

As a result of her seven year absence from the work force, Sandra can expect to have lifetime earnings of **\$924,000** and to accumulate superannuation worth **\$144,000**.

### **Valerie**

Valerie has the same level of education and age of entry to the labour market as Tracey. Her distinguishing characteristic is that, although she also spends the seven years from when she is 27 to when she is 34, *out of the workforce*, she *returns to work on a part-time basis*. Valerie continues to work on a part time basis until she retires at the age of 65.

The combined effect of a workforce absence and part time work means that Valerie can expect lifetime earnings of **\$637,000** and accumulated superannuation of **\$106,000**.

### **Audrey**

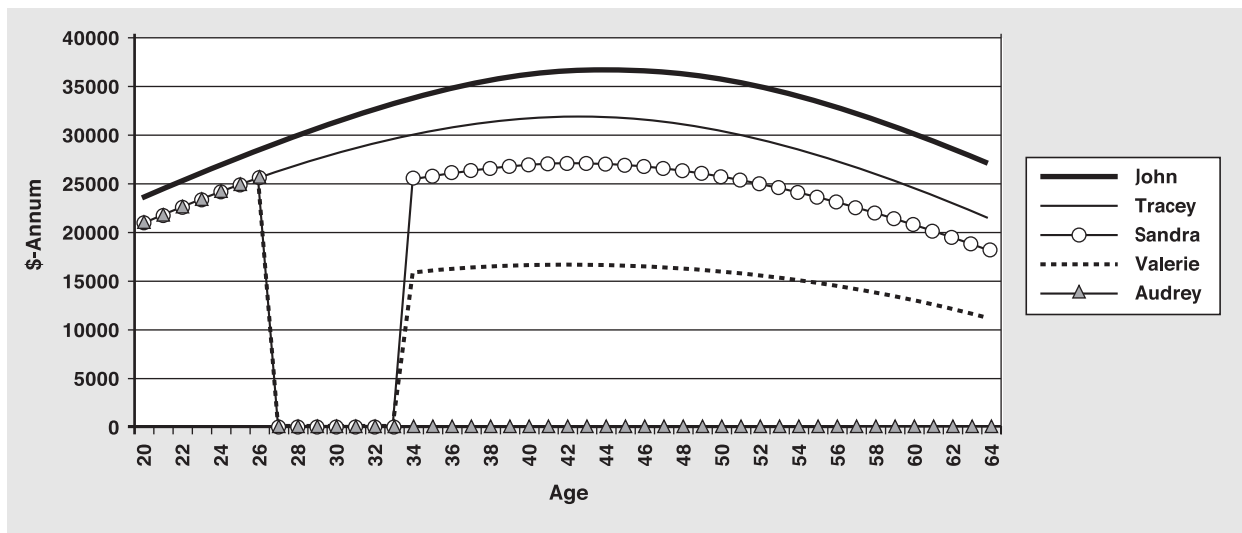
Audrey, too, has the same general characteristics as the other women. However, after leaving the workforce at the age of 27, Audrey *does not return to paid work*.

Audrey's short period in paid work means that she can expect lifetime earnings of **\$163,000** and accumulated superannuation of **\$43,000**.

Figure 4.1 identifies the estimated earnings of these five individuals over their careers, whilst table 4.2 provides a comparison of their gross lifetime earnings and levels of superannuation savings.

**Figure 4.1**

**Age earning profiles for different labour market groups.**



**Table 4.2**

**Gross lifetime earnings and superannuation for five stereotypical individuals**

	GROSS LIFETIME EARNINGS			SUPERANNUATION ACCUMULATION		
	GROSS LIFETIME EARNINGS \$	% OF JOHN'S LIFETIME EARNINGS	% OF TRACEY'S LIFETIME EARNINGS	TOTAL SUPER. ACCUM. \$	% OF JOHN'S TOTAL SUPER.	% OF TRACEY'S TOTAL SUPER.
<b>JOHN</b>	<b>1,440,000</b>	<b>100</b>	<b>-</b>	<b>\$233,000</b>	<b>100</b>	<b>-</b>
<b>TRACEY</b>	<b>1,256,000</b>	<b>87</b>	<b>100</b>	<b>\$206,000</b>	<b>88</b>	<b>100</b>
<b>SANDRA</b>	<b>924,000</b>	<b>64</b>	<b>74</b>	<b>\$144,000</b>	<b>62</b>	<b>70</b>
<b>VALERIE</b>	<b>637,000</b>	<b>44</b>	<b>51</b>	<b>\$106,000</b>	<b>45</b>	<b>51</b>
<b>AUDREY</b>	<b>163,000</b>	<b>11</b>	<b>13</b>	<b>\$43,000</b>	<b>19</b>	<b>21</b>

Assumption: all persons commence work at age 20 in 2000 and retire at age 65 if in the paid workforce at that time. The dollar estimates reported here are real dollars at 1996 levels.

## **GENDER WAGE DIFFERENCES MEAN WOMEN ACCUMULATE LESS SUPERANNUATION**

The differences in the lifetime earnings and superannuation savings of the five people reflect the impact of several labour market features and their relationship with superannuation outcomes. The gross lifetime earnings of Tracey, for example, are 13 per cent lower, and her superannuation savings 12 per cent lower, than John's. The observed gap between John and Tracey is the product of two forces: (a) a gender wage gap in the earnings of males and females employed full-time; and (b) a gender gap in the rate of return to additional years of labour market experience. The outcomes are net of the effects of other factors known to affect earnings (such as education, hours of work, birthplace and other demographic characteristics, e.g. marital status and children). The comparison of John and Tracey highlights the importance of labour market discrimination for women's relative income both pre- and post-retirement.

## **PERIODS OF WORKFORCE ABSENCE HAVE A DISPROPORTIONATELY NEGATIVE IMPACT ON SUPERANNUATION SAVINGS**

The comparison of Sandra's lifetime earnings with Tracey's highlights the large financial cost borne by women when they leave the workforce to care for children. Sandra's seven-year absence from work reduces her lifetime earnings by 26. The impact on her post-retirement income is even more dramatic, as this falls by 30 per cent, due to the lost contributions and the corresponding loss of compound interest at a relatively early stage of her retirement savings.

## **PART TIME EMPLOYMENT REDUCES SUPERANNUATION ACCUMULATION**

The lifetime earnings and superannuation savings of Valerie clearly demonstrate the influence of extended periods of part-time employment. Part-time employment is often used as a way of combining work and family responsibilities (see Austen and Birch, 2000). The gross lifetime earnings of Valerie are 69 per cent of Sandra's. However, because Valerie was able to make superannuation investments during the early part of her career when she was employed full-time, her overall level of superannuation on retirement is 74 per cent of Sandra's. The estimates, therefore, show that if women are able to accumulate superannuation contributions in the early part of their careers, the disadvantage in terms of their retirement incomes caused by part time work, although large, can be less than the loss in lifetime earnings. The result reflects the effects of compounded interest, where earnings (interest payments) are reinvested and compounded over a longer period of time to increase final returns.

## **MARGINAL WORKFORCE ATTACHMENT LEADS TO VERY LOW SUPERANNUATION ACCUMULATIONS**

As could be expected, Audrey's absence from the workforce after childbirth has a dramatic impact on her lifetime earnings and superannuation savings. Over her lifetime she earns 18 per cent of Sandra's lifetime earnings. The amount of superannuation accumulated by Audrey is 30 per cent of Sandra's. Again, the difference in these figures reflects the influence of early contributions to superannuation.

## EDUCATION AND OCCUPATION ARE IMPORTANT DETERMINANTS OF SUPERANNUATION ACCUMULATIONS

Thus far we have used information on men and women with average (high school) levels of education to generate our lifetime earning profiles and to estimate the impact of labour force attachment on superannuation. Rates of return to additional years of labour market experience are, however, affected by education and occupation. Degree holders, for example, are more likely to be employed in professional capacities than persons who left school without completing high school. Their earning profiles will be both higher (higher initial starting wage) and steeper (faster rate of growth) (Miller, 1982). Over their lifetimes, such people are likely to accumulate higher levels of earnings and superannuation.

To examine the effects of education and occupational status on superannuation savings, separate wage equations are estimated using the IDS96 data for three stereotypical people:

- **Bruce** – a professional man;
- **Deirdre** – a professional woman; and
- **Fiona** – a woman employed as a cleaner.

The coefficient estimates on labour market experience from these regressions were combined with information on starting salaries to construct age-earning profiles for our new set of hypothetical people.

Table 4.3 shows the gross lifetime income of the professionals (Bruce and Deirdre) and the cleaner (Fiona), together with estimates of their superannuation accumulation at retirement. It should be noted that we employ a rather extreme assumption here in that all of these people work on a full-time continuous basis until retirement at age 65. Our aim at this stage is simply to highlight the effects of education and occupational attainment on women’s lifetime earnings and retirement income.

The results show that the higher earnings of the professional woman (Deirdre) allow her to accumulate a level of superannuation that is 13 per cent above that of a woman with an average level of education/occupational status (such as Tracey). The amount of superannuation accumulated by Fiona, a cleaner, is almost 40 per cent less than Tracey’s.

**Table 4.3**

### Gross lifetime earnings and superannuation for different occupational groups

	GROSS LIFETIME EARNINGS		SUPERANNUATION ACCUMULATION	
	GROSS LIFETIME EARNINGS \$	% OF AVERAGE WOMAN'S LIFETIME EARNINGS	TOTAL SUPER. ACCUM. \$	% OF TRACEY'S TOTAL SUPER.
Bruce – Professional	1,688,000	134	273,000	133
Deirdre – Professional	1,426,000	114	234,000	113
Tracey – Average	1,256,000	100	206,000	100
Fiona – Cleaner	751,000	60	125,000	61

Assumption: all individuals commence work at age 20 in 2000 and are employed on a full-time continuous basis until retirement at age 65 in 2045. The dollar estimates reported here are real dollars at 1996 levels.

## DELAYING CHILDBIRTH CAN INCREASE SUPERANNUATION ACCUMULATIONS

Table 4.4 re-estimates the lifetime earnings and superannuation levels for the three women, Deirdre, Tracey and Fiona, taking into account a seven-year career break. Two sets of comparisons are presented. One assumes a career break between the ages of 27 and 34. The other delays child-birth and assumes a seven-year career break between age 32 and age 39. The objective of the exercise is twofold: (a) to show, as before, how periods of labour market absence impact on the earnings of different representative women; and (b) to demonstrate how the timing of children impacts on superannuation outcomes.

**Table 4.4**

**Effects of delaying children on earnings and superannuation.**

	GROSS LIFETIME EARNINGS			SUPERANNUATION ACCUMULATION		
	CAREER BREAK AGE 27-34	CAREER BREAK AGE 32-39	%	CAREER BREAK AGE 27-34	CAREER BREAK AGE 32-39	%
	\$	\$	DIFFERENCE	\$	\$	DIFFERENCE
Deirdre (Professional)	1,059,000	1,111,000	4.9	164,000	178,000	8.5
Tracey (Average)	924,000	973,000	5.3	144,000	156,000	8.3
Fiona (Cleaner)	617,000	625,000	1.3	96,000	101,000	5.2

A comparison of the results in Tables 4.3 and 4.4 shows that when Deirdre, a professional woman, has a seven-year career break between the ages of 27 and 34, her final superannuation or lump-sum is 30 per cent lower than her counterpart who has no career break. If she were to delay childbirth (e.g., assume that she is out of the workforce between the ages of 32 and 39) her relative lifetime earnings would increase (in the example, by 4.9 per cent) while her superannuation funds would grow by 8.5 per cent (see Table 4.4). The result derives from the loss in workforce experience during a period of relatively high earnings growth and reduced capacity to gain from compounded interest payments. The effect is smaller for less qualified women and those in low paid jobs (such as cleaning).

## SUPERANNUATION ADEQUACY ASSESSMENT

Thus far we have derived estimates of superannuation accruals for a range of different individuals and scenarios. These estimates have highlighted the importance of factors relating to workforce attachment, education, occupation, other determinants of wages and legislative provisions. However, we have yet to comment on whether the estimated levels of superannuation are sufficient to fund the income needs of retirees.

Assessing the adequacy of the level of retirement income generated under occupational superannuation arrangements is difficult. Answers as to how much is needed for retirement vary considerably from a minimum of 25 per cent of male average weekly total earnings (AWTE) to 100 per cent of pre-retirement income. However, most financial planners suggest that 75 per cent of pre-retirement earnings is a good retirement income target.

In this section we refrain from providing specific income targets, as the funds required in retirement will clearly vary between people, depending on their circumstances and access to other assets (such as private savings and home ownership). Our approach, instead, involves estimating the annuity (in our example, a series of annual payments) which will flow to a person following conversion of a lump-sum payment from a superannuation fund. This is then compared to the income level that is currently provided by the maximum level of the age pension. As before, we base our calculations on our representative individuals who retire at 65.

Our estimates should be treated as indicative only. In other words, they allow easy comparisons between people with different earnings histories and, hence, different superannuation accruals. It is unlikely that our estimates will be reflective of what people would actually get from insurers. The main limitation with our calculations is the artificial assumption that the period of annuity exactly matches the length of a persons' life. In other words, there is complete exhaustion of capital by the time of death. In reality the age of death is unknown, so the appropriate annuity cannot be determined.

The formula used to compute the annual annuity (R), with the principal (A) completely exhausted, may be written as follows:

$$R = \frac{A}{\left[ \frac{1-(1+r)^{-n}}{r} \right]}$$

where r measures the real rate of interest (as before, assumed to be equal to 3.25 per cent) and n measures the number of payments. Based on 1997-1999 life tables, Australian men and women who reach 65 may expect, on average, to live for another 16.6 and 20.2 years, respectively; in other words n is equal to 16.6 years for men and 20.2 years for women.<sup>xvi</sup> (We assume that the lump sum used to purchase the annuity is not subject to tax.) There is no adjustment for inflation; estimates provided are in real 1996 dollars. Table 4.5 shows the annual private pension payments that would flow from various lump-sum investments.

**Table 4.5**  
**Retirement benefits of people with different income histories**

	<b>JOHN</b>	<b>TRACEY</b>	<b>SANDRA</b>	<b>VALERIE</b>	<b>AUDREY</b>
Lump-sum invested (\$)	233,000	206,000	144,000	106,000	43,000
Private Pension (per annum) (\$)	<b>18,383</b>	<b>14,068</b>	<b>9,834</b>	<b>7,239</b>	<b>2,937</b>

Notes: Based on the above formula the divisor for men is equal 12.675; for women it is equal to 14.643. The difference reflects gender differences in average life expectancy at age 65. All figures are expressed in 1996 real dollars.

To assess the adequacy of these annuities, we compare them to income levels available under the age pension. As previously noted the full-rate age pension is set at 25 per cent of male average total weekly earnings (MATWE); in 1996 this was equal to \$8,753 per annum. Twenty-five per cent of MATWE is considered a minimum or safety-net retirement income level.

The estimates show that, under the current arrangements for superannuation, Valerie (who has a seven-year career break and returns to the paid workforce on a part-time basis working 24 hours per week until retirement at age 65) would, in the absence of any other income source (such as the age pension), have a private income stream of \$7,239 in each year of retirement; \$1,514 or 17 per cent less than 25 per cent of MATWE. In other words, without making additional private savings (either in the form of voluntary superannuation contributions or through other forms of investment such as property), Valerie's capacity to generate a private retirement income above the minimum is considerably constrained within the SGC (compulsory) occupational superannuation system. Valerie would remain dependent on the age-pension in retirement, notwithstanding strong levels of labour market attachment throughout her working life.

In the absence of other sources of income, Audrey (who leaves the paid workforce at age 27 and never returns) would have a private pension equal to around one third of the minimum retirement income level.

The significance of these results lies in the fact that Valerie's and Audrey's labour force characteristics are similar to many Australian women's. As discussed in section three, part time work or non-participation in the paid labour market is relatively common, particularly among women with young children.

The results are even more startling when considered in conjunction with the information contained in Table 2.4, which, as mentioned previously, indicate that around 30 per cent of women in the pre-retirement population have no superannuation coverage and 44 per cent of women with a superannuation account (and a balance that could be determined) had less than \$5,000 accumulated.

Government predictions suggest that the SGC will not significantly change the *number* of retirees claiming the age pension, although the new arrangements could be expected to increase the number receiving only a part pension (see Gallery, Brown and Gallery, 1996, for further discussion). Estimates presented in this paper suggest that many women with weak attachment to the workforce will remain dependent on the full age pension (assuming no other sources of income, such as spouse's superannuation or personal savings). Other women with a strong attachment to the workforce, albeit in a part-time capacity, will also be heavily dependent on the government age pension system in retirement.

As at July 2000 the maximum fortnightly income a single person could receive and still be eligible for the full age pension was \$106 per fortnight or \$2756 per annum. The pension disqualifying income limit for a single person was \$1087 per fortnight (\$28,262 per annum).<sup>xvii</sup>

## **BABY BOOMERS AND SUPERANNUATION**

Thus far our vignettes have examined hypothetical cases of persons entering the workforce at age 20 in 2000 and retiring 45 years later. In other words we have modelled anticipated outcomes under a fully matured compulsory superannuation system.

Clearly the age of retirement and number of years contributing to the is a critical determinant of levels of funds accumulated. One group that is particularly at risk in the near-future is the 'baby boom' generation (comprised of people born between 1946 and 1964). Prior to the introduction of the SGC in 1992 many of these baby boomers were

without superannuation. In 1992, the oldest baby boomers were aged 46 and the youngest aged 28. Table 4.6 shows estimated levels of superannuation that our 'average' hypothetical individuals (John, Tracey, Sandra, Valerie and Audrey) could expect to accumulate depending on their age in 1992. Estimates are all provided in real 1996 dollars. Column 3 shows levels of superannuation that might be generated if the individual was covered by the SGC throughout their entire working life; column 4 shows estimates for 'young baby boomers' (those aged 20 in 1984); column 5 shows estimates for 'old baby boomers' (those aged 20 in 1966).

**Table 4.6**

**Baby Boomers and Superannuation**

	<b>GROSS LIFETIME EARNINGS \$</b>	<b>TOTAL SUPER.<sup>a</sup> ACCUM. (ORIGINAL)</b>	<b>TOTAL SUPER.<sup>b</sup> ACCUM. FOR 'YOUNG' BBs</b>	<b>TOTAL SUPER.<sup>c</sup> ACCUM. FOR OLD BBs \$('000)</b>
John	\$1,440,000	\$233,000	\$149,000	\$46,000
Tracey	\$1,256,000	\$206,000	\$129,000	\$39,000
Sandra	\$924,000	\$144,000	\$95,000	\$33,000
Valerie	\$637,000	\$106,000	\$59,000	\$21,000
Audrey	\$163,000	\$43,000	\$0	\$0

Real dollars at 1996 levels. Notes: In all cases it is assumed that the individuals started work at age 20. In the case of: (a) aged 20 in 2000; (b) age 20 in 1984; (c) age 20 in 1966.

Under the SGC, and assuming no change in the employer contribution rate of 9 per cent post 2003, the most that a 'young' average baby-boomer who has had time out of the labour market and has returned to part-time employment could expect to accumulate would be \$59,000 (see Valerie). If the same person was an 'old' baby-boomer she would save \$21,000 under the SGC over her working life.

These estimates are consistent with published ABS data on account balances. In 2000 the median balance for the pre-retired population with superannuation coverage and aged between 55 and 69 was \$38,269 for men and \$18,815 for women (unpublished data from ABS Cat. No. 6360). Using the same adequacy assessment approach as applied above, a 'nest-egg' of \$21,000 on retirement would deliver an annual income stream of \$1,434 (or \$27.5 per week) to an average woman who plans to exhaust all her superannuation by the time of death at age 85. A nest-egg of \$59,000 (achieved by a young baby-boomer Valerie) would deliver an annual income stream of around \$4029 (or \$77 per week). It is clear from these estimates that few of the baby boomer generation are likely to be 'independent' in retirement.

**ACCUMULATING SUPERANNUATION ENTITLEMENTS: SUMMARY**

It is frequently argued that increased workforce attachment (even if in part-time work) together with the SGC, should substantially improve the financial circumstances of women in retirement. The results of the micro-simulations detailed in this paper, however, caution against such generalisations. Women who are employed on a part-time basis throughout most of their working lives, or who have extended periods of absence from the workforce, will struggle to achieve income levels in retirement equivalent to the current full age pension.

# 5. Discussion and Policy Options

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The microsimulations illustrate that occupational superannuation can be expected to deliver lower benefits to women compared with men. However, the current structure of Australia's retirement income framework offers considerable flexibility in addressing this issue. In this section we consider some options which could improve gender equity in the area of retirement incomes. Some of these options focus upon the broad structure of the framework and the balance between private savings and government transfers. Other measures address specific provisions relating to the operation of occupational superannuation.

Currently, Australia's current retirement income framework is a hybrid of two conceptually different types of income transfers. The first type, of which aged pensions are an example, is a system of intergenerational transfers. That is, current taxes from the working population are used to provide current incomes to the retired population. This type of system has been described as "a compact between successive generations; generation B supports generation A in the expectation that it will be supported by generation C, and so on" (Hancock 1981, p.11). When a population is growing and has stable or growing workforce participation rates, each successive working population is larger than the retiring population. It has been argued that this can form a basis to either lessen the burden of retirement incomes for each working generation or to increase the transfers to each successive retired population, a "biological rate of interest" (Samuelson, 1958).

Australia's current pension scheme reflects an intergenerational transfer that has relatively broad coverage. It is this aspect which makes it particularly accessible to women who may have had broken employment patterns. In addition, as women generally pay less tax on their relatively lower earnings and have longer life expectancies, the aged pension scheme can have redistributive effects which favour women.

The second type of transfer requires each person to take into account their expected earnings over their life and to save during their working life in order to finance their retirement. They transfer consumption from one part of their life in order to provide for a later period and, in doing so, accumulate capital. This is being achieved through savings scheme such as superannuation. As illustrated, this is becoming of increasing importance to the level of retirement incomes.

Within the private savings type of system each person must make a number of assessments relating to their current income, their expected future income, their required level of savings and their life expectancy. These are complex issues and when an individual is on a low income, it may be difficult to forgo current consumption in order to save for a future retirement. It has been argued that the shift in emphasis from intergenerational transfers to capital accumulation also represents a privatisation of the risks associated with retirement income provision (Gallery, Brown and Gallery, 1996; Kelly 1997).

In contrast with the age pension scheme, women have been less successful in accessing superannuation as a form of retirement income. In section 3, the labour characteristics of women that result in their limited access to superannuation were examined. However, some institutional and legislative features of the emerging retirement income framework tend to reinforce the significance of these characteristics. The following section provides a discussion of some of these issues.

## **SOME POLICY OPTIONS: AN ALL-INCLUSIVE APPROACH TO THE COSTS OF CURRENT RETIREMENT INCOME PROVISIONS**

Successive governments have promoted the development of occupational superannuation through the provision of significant tax concession and rebates as a way of easing the pressure on the public pension system. For example, superannuation funds generated in a complying scheme are taxed at a rate of 15 per cent, as compared with tax rates on other forms of income of up to 47 per cent. It has been estimated that a person earning \$90,000 a year will receive tax concessions on superannuation that are worth three times as much as the eventual pension drawn by someone earning below average weekly earnings (Cox, 1994). It has also been argued that, concessional taxation arrangements involve a higher net cost than funding the aged pension (Kelly 1997. p.73). The validity of this argument depends upon the assumptions used. However, the significance of taxation concessions is indicated by the fact that they were estimated to be worth \$9.4 billion in 1998/99 (Bishop, 1999) and are projected to rise to \$12 billion in 2004/2005 Budget Papers (2001). By way of comparison, total Commonwealth government expenditure to assist the aged is reported as only \$19 billion (Budget Papers 2001).

Compared with occupational superannuation, measures such as pensions, subsidised health services, pharmaceutical benefits and rent assistance are relatively accessible to people with low retirement incomes, including women. In addition, these measures are relatively amenable to means testing, which provides a method of targeting expenditure to those groups in greatest need of income support. Continued and improved support of these expenditures can form the basis of a retirement income framework which addresses the gender inequities associated with occupational superannuation. The provision of benefits can also provide a role for State and Local governments to address inequities.

## **SOME POLICY OPTIONS: TAXATION PROVISIONS**

In addition to ensuring adequate support through government transfers, changes to specific legislative provisions relating to superannuation could be expected to enhance women's retirement incomes. However, the Commonwealth government has no express constitutional powers to make laws with respect to superannuation. It has relied almost exclusively on its powers to make laws with respect to taxation to provide incentives for investment in superannuation and to comply with the mandatory provisions of the Superannuation Guarantee contributions.

As a result, savings invested in the form of superannuation are subject to a number of specific taxation provisions. The full range of taxation provisions relevant to superannuation is complex. However, some of the main provisions are outlined here in summary:

- Personal earnings that are contributed to superannuation are generally made out of after tax income. When contributions from after tax income are received by a superannuation fund they are not taxed.
- A surcharge of up to 15 per cent is payable on the contributions of high income earners. (For 1999/2000 the threshold level was \$78,208 per annum). (Note: During the 2001 Federal election campaign, the Coalition promised to reduce the superannuation and terminations surcharge by a tenth of their current level over each of the next three year (a maximum of 1.5 percentage points each year).

- Low income earners (gross income less than \$31,000) can claim a tax rebate of up to \$100 for personal contributions made to a superannuation fund. (The Coalition promised to replace this rebate with a co-contribution to match the personal superannuation contributions of low income earners up to an annual amount of \$1,000. The maximum co-contribution would apply to those on or below an income of \$20,000 and would taper off for those on incomes between \$20,000 and \$32,500.)
- A person making contributions of up to \$3,000 to the fund of a low income spouse (gross income less than \$13,800) can claim a rebate of 18 per cent. (The Coalition undertook to allow couples to split their superannuation contributions.)
- Employer contributions to superannuation are a tax deductible expense. When employer contributions are paid to a superannuation fund, they are taxed at a rate of 15 per cent.
- Superannuation fund earnings are taxed at a rate of 15 per cent.
- Superannuation benefits payable to individuals upon retirement are subject to relatively complex taxation arrangements, but in general are taxed at either 0, 15 or 30 per cent, depending on the amount of tax previously paid and the amount of the benefit. Payments in excess of specified Reasonable Benefits Limits are taxed at the individual's marginal rate of income tax.

These rates compare with the current company tax rate of 36 per cent per cent and marginal taxes on income of up to 47 per cent. The incentives to save for retirement through superannuation contributions are therefore most significant for those on the highest level of marginal tax on their personal income.

For those on very low incomes there is little incentive to save through a superannuation scheme. For those on incomes below the tax-free threshold of \$5,401, other forms of investment may result in tax-free income, while the earnings of superannuation funds are taxed at a rate of 15 per cent. Individuals earning less than \$20,701 pay a marginal rate of income tax of 20 per cent, and an average rate of up to 15 per cent. For this group too, there is little incentive for allocating savings to a superannuation scheme.

As women are overly represented in the groups of low income earners, measures which enhance the ability of low income earners to make superannuation contributions or which provide additional incentives to do so may be expected to address current gender inequities.

Along with the changes included in the above summary of taxation provisions, during the 2001 Federal election campaign Coalition undertook to introduce the following changes

- Allowing superannuation contributions up to \$1,000 per annum to be made on behalf of children who do not otherwise have superannuation.
- Increasing the deduction allowable for superannuation contributions made by self employed persons.
- Reducing the tax rate on the excessive component of an eligible termination payment from a superannuation fund.

- Allowing the First Child Tax Refund to be contributed by the parent to their superannuation fund.
- Increasing from 70 to 75 the age up to which members can make personal undeducted superannuation contributions.
- Implementing choice of funds and portability to give workers the right to decide which fund their superannuation benefits are paid into.
- Examining the possibility of allowing growth pensions to receive concessional tax and social security treatment.
- Permitting non-residents to access their superannuation benefits after they have permanently departed from Australia, subject to withholding of tax concessions provided to the benefits. (Liberal Party 2001).

Without examining the detail of policies which are yet to be introduced through legislation, a general observation may be made that, in general, these measures will offer the greatest advantages to those with sufficient income to take advantage of incentives to invest additional funds in superannuation. For those with relatively low disposable incomes, the capacity to access these measures may be limited.

### **SOME POLICY OPTIONS: REMOVING THE \$450 RULE**

Among the options which specifically relate to occupational superannuation, one is to remove the \$450 per month rule. To illustrate the current impact of the ‘\$450 per month’ rule on the retirement incomes of some women, we can consider the case of Valerie (the part-time worker from Section 4) and assume that she works 24 hours a week in two jobs (rather than one). In one job she earns \$449 in a calendar month and is, therefore, not entitled to superannuation on those earnings. The results of this simulation are shown in Table 5.1. Although Valerie’s gross lifetime earnings remain unchanged, her level of superannuation at retirement is *20 per cent lower*.

**Table 5.1**

**Effect of the \$450 threshold on levels of superannuation.**

	Valerie with one job (original) \$	Valerie with 2 jobs: one paying < \$449 per month \$	% difference
Gross lifetime earnings	637,000	637,000	0
Superannuation accumulation	106,000	84,000	-20

The rationale for the \$450 per month rule is that they are likely to be in greater need of current earnings to a greater extent than more highly paid workers and therefore it may be an imposition to require compulsory savings on their behalf. This reasoning is also consistent with the issues discussed above which show that superannuation does not provide the same tax benefits to low income earners as it does to high income earners.

However, the provision may provide some adverse incentive effects. It is possible that it will make it attractive to some employers to ensure that work is allocated to part time and casual employees in a manner, which precludes their earnings from exceeding the superannuation threshold of \$450. Specific research into whether this occurring could not be found, however, anecdotal evidence would suggest that it is not uncommon for casual employees in some industries, for example retail trades and hospitality, to be on roster's that ensure that casual and part time workers to not earn in excess of \$450. Removal of the \$450 rule would remove this incentive, and as illustrated above, deliver some retirement income benefits to low income earners.

## **SOME POLICY OPTIONS: INCREASING COMPULSORY CONTRIBUTIONS**

Higher rates of compulsory contribution would raise superannuation accumulations. When fully implemented (in 2003) the SGC will provide for a level of mandatory employer contributions of 9 per cent. The Association of Superannuation Funds of Australia (ASFA) is, however, currently lobbying the government to raise the level to 12 per cent.

Table 5.2 demonstrates the effects that this change in compulsory contributions would have on the overall level of superannuation savings. It is assumed that the movement towards the 12 per cent contribution rate would be gradual: 10 per cent in 2005 and 2006, rising to 11 per cent in 2007 and 2008, and 12 per cent in 2009. The estimates show that the extra contributions would deliver significant increases in the superannuation funds accumulated by people eligible for superannuation. To again use Valerie (who works part-time and has a 7 year career break), as an example, extra contributions would result in a 20.8 per cent increase in her superannuation savings over her lifetime. However, the greatest benefits of this change would go to John, which would lead to greater inequality.

**Table 5.2**

### **Effects of an increase in compulsory savings from 9% to 12%**

	John	Tracey	Sandra	Valerie	Audrey
Gross superannuation accumulated under current arrangements (\$)	233,000	206,000	144,000	106,000	43,000
Gross superannuation with a gradual increase in the rate from 9% to 12% (\$)	295,000	260,000	178,000	128,000	45,000
Percentage change (%)	26.6	26.2	23.6	20.8	4.7

Note: the estimates here are for a representative person aged 20 in 2000. The assumed age of retirement is 65.

## **SOME POLICY OPTIONS: REMOVING THE 15 PER CENT TAX ON EMPLOYER'S CONTRIBUTIONS**

Removing the tax on employer's contributions would have a similar effect to that of increasing contributions. Table 5.3 shows the simulated effects of a removal of the 15 per cent tax on compulsory contributions by employers. Again using the hypothetical cases from Section 4, John, an 'average' Australian born male who works on a full-time continuous basis from age 20 to 65, would accumulate an additional \$41,000 (18 per cent) over his lifetime following the removal of this tax. Valerie would increase her superannuation savings by 17 per cent, or \$18,000.

**Table 5.3**

### **Effects of a removal of the 15% tax on compulsory contributions**

	John	Tracey	Sandra	Valerie	Audrey
Gross superannuation accumulated under current arrangements (\$)	233,000	206,000	144,000	106,000	43,000
Gross superannuation accumulated with the removal of the 15% tax on compulsory contributions (\$)	274,000	242,000	169,000	124,000	51,000
Actual Change (\$)	41,000	36,000	25,000	18,000	8,000
Percentage change (%)	18	17	17	17	19

Note: the estimates here are for a representative person aged 20 in 2000. The assumed age of retirement is 65. Real 1996 dollars.

## **SOME POLICY OPTIONS: MATERNITY PAY**

Broken employment patterns, particularly as a result of child bearing and rearing are a major source of women's relatively limited ability to accumulate superannuation entitlements. Any measure which assist with ensuring continued contributions during labour force absences can be expected to contribute to enhanced superannuation accumulations. The example provided illustrates the benefits that could be expected through the introduction of a three month period of paid maternity leave, but is relevant for other measures which maintain contributions.

The Table 5.4 below identifies the change in the level of superannuation savings achieved by the Section 4 individuals, Sandra, Valerie and Audrey following the payment of three months full maternity pay. Sandra returns to work full-time, Valerie returns part-time and Audrey never returns.

**Table 5.4**

**Ratio of Lifetime Earnings and Superannuation Accumulation With and Without Maternity Pay.**

	Sandra	Valerie	Audrey
Gross Life-Time Earnings	0.7%	1.0%	3.9%
Superannuation Accumulation	1.1%	1.5%	3.7%

These figures identify that although the impact on lifetime earnings of this amount of maternity pay is relatively small, the effect on superannuation savings is, generally, much greater. For example, Valerie’s superannuation would be boosted by approximately 1.5 per cent by such a payment. These benefits are due to the effects of compound interest.

**SOME POLICY OPTIONS: FEES AND CHARGES**

Flat rate or minimum fees on superannuation accounts have a disproportionately large effect on small account balances. This is particularly relevant for women with small superannuation balances due to their low income and/or broken employment patterns.

Currently, legislation applies which prevents “small balances” from being reduced through the imposition of fees and charges. However, for these provisions to apply, the “small balance” must be less than \$1,000 and the fees and charges imposed must not exceed interest credited to the account. For example, if an account of \$500 was to be credited with \$10 of interest and charged with \$9 of fees, this would be permissible as there is a credit balance of \$1 remaining. In addition, the provisions apply to only some forms of deductions that may reduce an account balance, specifically, entry or exit fees, asset management fees and regular account charges. Payment of insurance premiums, application of negative investment returns and taxation charges are not subject to these limitations. If a superannuation fund does not ‘member protect’, the fund member has the right to transfer to a fund which has these provisions.

These provisions give limited protection to those with small superannuation fund balances. One reason for this is that an account balance of \$1,000 or less can be considered extremely small in the context of saving for retirement. However, two other factors limit the legislations effect.

Firstly, while maintaining the dollar value of the account, this provision does little to address the real value of the money in the account. To return to the above example, the crediting of \$1 to a \$500 dollar account will maintain the real value of that account only if the inflation rate for the relevant period has been less than 0.2 per cent. An inflation rate of any greater amount would mean that the real value of the account balance is eroded.

Secondly, if the fund makes a negative return on its investments, this will be applied to small account balances in the same manner as all other accounts. As the funds are not capital guaranteed, the small account holder faces the same risks of incurring a negative return as that faced by all other account holders in the fund.

The impact of this legislation is therefore limited. The relatively regressive effects of fees and charges on accounts, which may be considered modest but exceed \$1,000, are not covered by these provisions. Measures which further reduce the burden of fees and charges on small balances could be expected to have a small but targeted effect beneficial to women.

### **Discussion and Policy Options: Summary**

The current retirement income framework allows considerable flexibility with respect to the measures which could be taken to address current gender inequities. Government transfers are readily accessible to women and through means testing can be targeted to those most in need of some type of income support. However, there are also a range of specific measures which could make occupational superannuation more accessible to those with low incomes or broken work patterns. For example, removal of the \$450 threshold level and the 15 per cent employer contribution tax could make a significant difference to the level of superannuation funds accumulated by some Australian women.

# 6 . S U M M A R Y

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Australia's current retirement income system is a combination of intergenerational transfers of income through the age pension and capital accumulation through occupational superannuation and private savings. Within this system, women tend to rely more heavily than men on transfers due to their lower lifetime earnings and relatively restricted ability to fully participate in occupationally based superannuation schemes.

This report uses a number of micro-simulations to assess how a shift towards a retirement income system centred on occupational superannuation might impact on the economic well-being of women and those with intermittent patterns of labour market activity.

It is frequently argued that increased workforce attachment (even if in part-time work) together with the SGC, should substantially improve the financial circumstances of women in retirement. The results of the micro-simulations detailed in this report, however, caution against such generalisations. Women who are employed on a part-time basis throughout most of their working lives, or who have extended periods of absence from the workforce, will struggle to achieve income levels in retirement equivalent to the current full age pension, even under a fully matured compulsory superannuation scheme.

While the current superannuation system can be improved, there is a need to broaden the current debate over retirement incomes away from a narrow focus on superannuation. Taxation concessions to superannuation are extensive and relatively favourable to those on higher incomes. For reasons of equity and accessibility these measures should be viewed within the total system of retirement incomes, including the framework of government transfers. Many women with a weak attachment to the workforce will remain heavily dependent on the government age pension in retirement. This is particularly the case for the baby-boom generation who are rapidly approaching retirement. There is a danger that the current policy shift in favour of compulsory savings in private superannuation schemes will see a magnification of current retirement income inequities and a retreat by government from its obligations to all retirees.

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## NOTES

- i Tax expenditures on superannuation are projected to rise to \$12bn in 2004-05, up from \$9bn in 2001-02. Over the same period the cost of the Age Pension is projected to rise from \$16bn to \$19bn (Budget Papers 2001).
- ii If the individual is a refugee, war veteran or deemed to be disadvantaged in the labour market, the criteria to qualify for the age pension are reduced.
- iii Before recent changes that came into affect in 1995, married women were eligible for the 'wife pension'. The wife pension was designed to give both members of a couple the pension when only one member qualified. For example, in the case of a couple where only the male had reached the qualifying retirement age, the female partner automatically qualified for the wife pension, irrespective of her age. Over 32 000 women in Australia are wife pension recipients, (Commonwealth Department of Family and Community Services, 1999).
- iv If the individual is paid under an award, it may state that the employer must contribute to a superannuation fund, even if the individual earns less than \$450 a calendar month
- v Such negotiations may include match employer contributions for personal superannuation contributions and, salary sacrifice for larger superannuation.
- vi Aspects of the research reported in this section have previously been published by the Australian Bulletin of Labour (see Preston and Austen, 2000)
- vii We control for these characteristics and later relax some of the assumptions, such as birthplace and geographic location, as a way of showing that life-time earnings and superannuation contributions also vary by such parameters.
- viii Estimates based on the IDS96 data base show that the adjusted (i.e. controlling for characteristics such as education, experience and other factors known to affect earnings ) average gender wage gap in Australia in the full-time labour market is around 10.5 per cent (Preston 2000). We acknowledge that this gap will be lower amongst junior workers (e.g. those aged 20). Miller and Rummery (1991), for example, estimate that the adjusted gender wage gap amongst 19-25 year olds is 4.9 per cent. There are, however, very few studies available where the adjusted gender wage gap has been estimated for different age groups. Accordingly, we apply the overall average to our estimates here. The limitation of this approach is that it may overstate the earnings of young men. However, the focus of our study is primarily on comparisons amongst women rather than comparisons between men and women. With this in mind we believe that the approach adopted is reasonable.
- ix Full details of these models, together with the results, may be found in Preston and Austen (2001), Appendix A.
- x One weakness with the IDS data (a weakness shared by many other data sets) is the lack of information on actual labour market experience. Following convention 'potential' labour market experience is defined here as age minus years of schooling minus 5 (assumed aged when schooling commenced). It is generally acknowledged that this potential measure is a poor proxy for female labour market experience, on account of their intermittent labour

market activity. This explains why the sample is restricted to persons employed full-time. An underlying assumption of the model is that those who are employed full-time have essentially worked full-time over their entire working career. For many full-time workers this is a reasonable assumption. It means that the estimated experience coefficients provide a reasonable approximation of the rate of return to an additional year of labour market experience. There are a number of different ways to adjust the potential measure to perhaps more accurately reflect the actual labour market experience of older women. However, research shows that the varied approaches generate mixed results and impart additional biases into the results (Blinder, 1976; Preston, 2001, pp14-27). In the absence of information on actual labour market experience variables controlling for marital status and the presence and age of dependant children are used to capture penalties associated with intermittent labour market experience.

- x<sup>i</sup> Although we have continuous data, for simplicity and ease of presentation we have grouped the data into age groups with intervals of 5 years.
- x<sup>ii</sup> An acknowledged limitation with this approach is that, relative to women employed full-time, the experience earnings profile may be flatter for women employed part-time. One could try and develop some correction parameter by estimating a wage equation for part-time workers and calculating their rate of return to experience. However, as before, such a methodological has its inherent weaknesses in that it assumes that the worker has only ever held a part-time job. Given these methodological limitations we prefer to simplify the analysis by estimating part-time earnings as a proportion of full-time earnings. To the extent that there are differences in the experience earning profiles of women employed full-time and women employed part-time, our results will most likely overstate the gross life-time earnings of part-time workers and their resultant levels of superannuation.
- x<sup>iii</sup> The Accord era (1980s), for example, is widely seen as having led to a reduction in the real wage of many labour market participants.
- x<sup>iv</sup> This assumption is fairly reasonable. According to ABS data collected in 2000, only 18.7 per cent of women in employment have superannuation funds which consist of personal/spouse contributions and employer/business contributions. (Amongst men the corresponding share is 25.2 per cent) (ABS 6361.0, Table 15).
- x<sup>v</sup> This equates to the standard investment real rate of interest recommended by the Australian Securities and Investment Commission (ASIC) for use when calculating investment returns on a balanced style investment portfolio.
- x<sup>vi</sup> Clearly the choice of  $n$  will vary across individuals depending on their knowledge of their health and attitudes to risk. Some individuals may prefer to retain some capital rather than completely exhaust their principal so soon after retirement. In this study  $n$  is estimated as the remaining life-expectancy at age 65. In the case of women  $n$  is equal to 20.2. This would appear to be an appropriate factor. Research prepared by ASFA (1999) suggests that a factor of 19.26 years is currently used by many financial institutions for the life-expectancy of women.
- x<sup>vii</sup> In the most recent budget (Budget 2001) the government announced that the tax-free threshold for retirees would be raised to \$20,000. This will ease the burden on many retirees with some private income (e.g. from superannuation).



