

**The Continuing Problem of Women's
Retirement Income**

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Abstract

Will the current superannuation arrangements in Australia provide adequate retirement incomes for women? To address this question, this paper provides estimates of how much superannuation low, medium and high income women can expect to accumulate over their working lives. The estimates are based on 1995 income data from the Australian Bureau of Statistics. The lifetime inflation-indexed pension which could be purchased with this amount of superannuation is then calculated and compared with the present value of the age pension. The analysis shows that many women will derive little benefit from superannuation. Even if they are in paid work continuously for forty five years, women at the lowest end of the income range are likely to accumulate a retirement income less than the current age pension. Breaks from paid work, especially during a woman's early or late twenties, will reduce many women's retirement incomes from superannuation to below the age pension. Those women who do not begin superannuation contributions until after the age of thirty are particularly disadvantaged. In particular, the accumulated superannuation of women who begin contributing at the age of forty is unlikely to produce an income higher than the age pension, even for high income women.

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Introduction

In a discussion paper produced by EPAC and the Office for the Status of Women, Ross Clare has argued that

Superannuation is likely to be a continuing “problem” for many women. Almost all superannuation schemes are designed to cater for the needs of those who are in the paid labour force for a period of three or four decades on a full time basis. For many women, and an increasing number of men, this model is neither relevant nor appropriate. (1994, p25)

Other Australian researchers and commentators, for example, Eva Cox (1992), Rhonda Sharp (1995), and Linda Rosenman (1995), have expressed similar views.

This paper investigates how large a “problem” superannuation is for Australian women. Since on average women earn less than men and spend fewer years in the paid work force, it is obvious that on average, women will accumulate less superannuation than men. This paper provides estimates of how much superannuation women and men at various income levels would expect to accumulate over a working lifetime given the current superannuation arrangements. From these estimates, we can judge the degree to which women are disadvantaged relative to men. The paper also estimates the adequacy of these amounts of superannuation as a source of income in retirement.

In the first part of the paper, superannuation contributions are based on the assumption that each person enters the paid work force at the age of 20, and works continuously until the age of 60 or 65. The second part of the paper considers the effect of a five year break from paid work at several different ages. The main focus of the paper is therefore on the longer term, on the amount of superannuation that people would accumulate if the present arrangements applied for the whole of a working life. At present, however, there are many Australian women who did not make any superannuation contributions for the first part of their working lives. The third part of this paper therefore provides some estimates of the amount of superannuation that these women will accumulate.

Description of the method of analysis

Data

Ideally, to model the amount of superannuation that is accumulated over a working life we need to use longitudinal data on income, that is, data which follows individuals over a period of 40 or 45 years. Such data is unavailable in Australia. This study therefore uses cross-sectional data and investigates the superannuation outcomes that would occur if the pattern of income distribution remained constant. The data used is unpublished Australian Bureau of Statistics data, Weekly Earnings of Employees (Distribution) August 1995 (ABS Catalogue 6310.40.001).

Figures 1 and 2 summarize the income data on which this study is based. The graphs show the distribution of weekly earnings including both full-time and part-time work for different age groups. Thus, for example, from Figure 1 we see that more than 100,000 males aged 30-34 earned between \$480 and \$599 per week, and that this was the most common income category for males of this age, whereas from Figure 2 we see that the most common income category for women aged 30-34 was \$360 to \$479 per week.

Figures 1 and 2 illustrate two important and well-known features of the Australian labour market. The first is that women earn substantially less than men. The four lowest income categories (income up to \$479 per week) account for more than half of women in the paid work force at all ages, whereas this is only true for men up to the age of 24. Between the ages of 30 and 50 over 100,000 men are in the 3 highest income categories (\$840+ per week) but only about 25,000 women in this age group earn this much.

Secondly, after the age of 20 there are many more men than women in the paid workforce, even when part-time work is taken into account. For example, in the 35-39 age group, there were nearly 500,000 men in paid work but only 400,000 women.

It is obvious, then, that taking the population as a whole, the superannuation accumulated by males will be substantially more than that accumulated by females.

Figure 1 Earnings distribution by age, males, full and part-time, August 1995

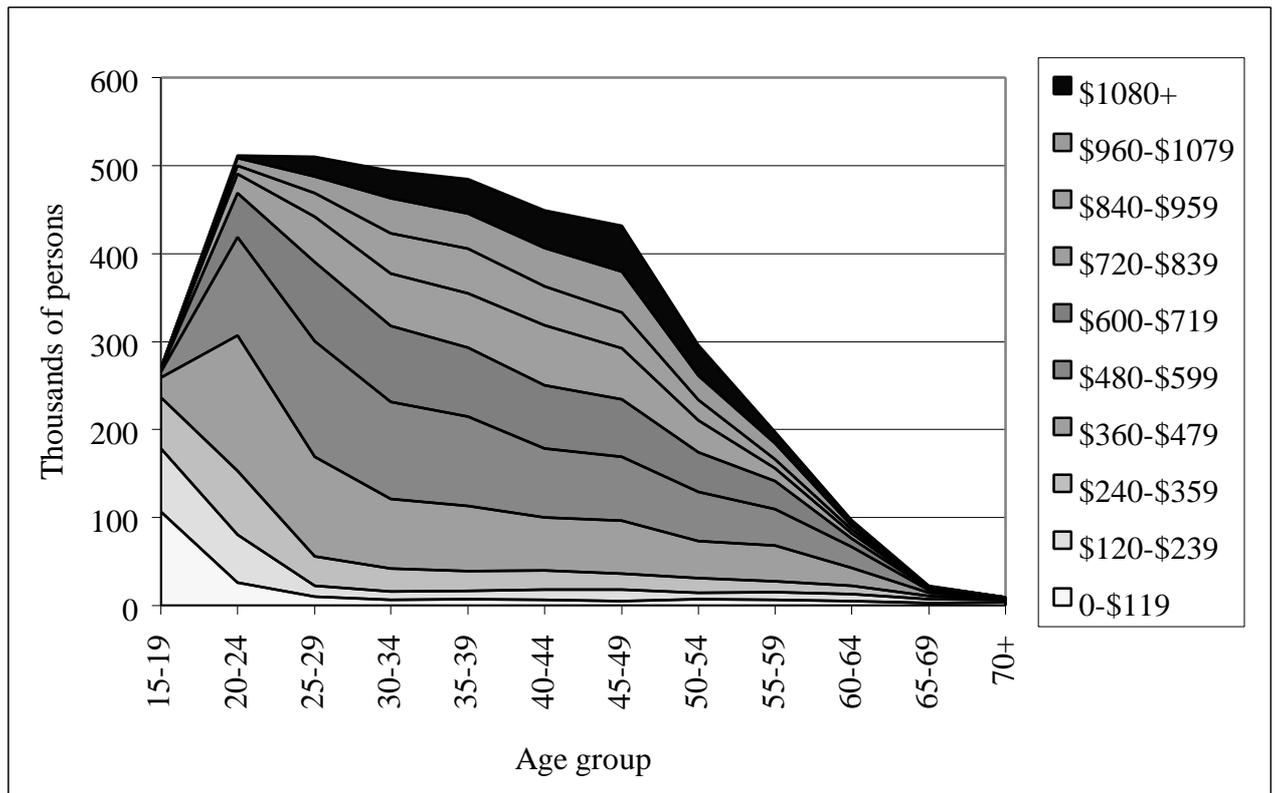
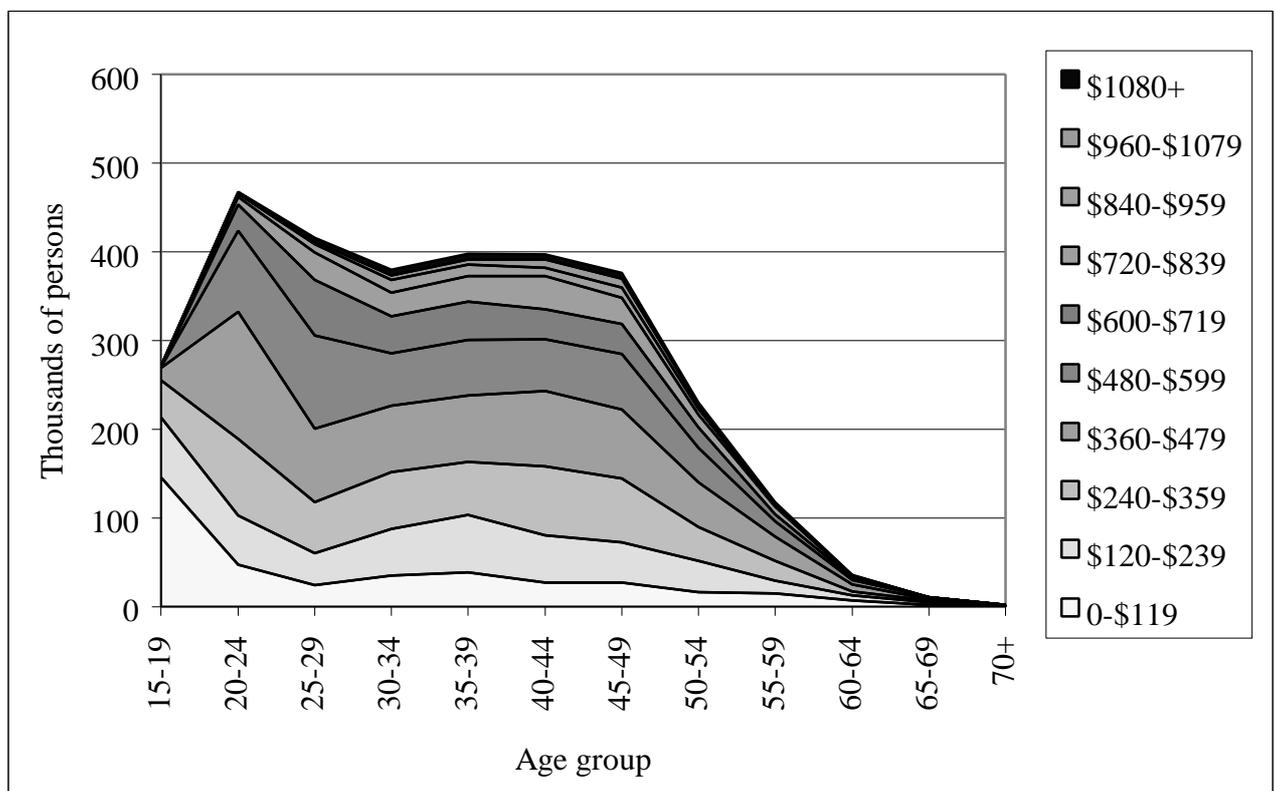


Figure 2 Earnings distribution by age, females, full and part-time, August 1995



Because no longitudinal income data are available, this paper constructs incomes for 10 'individuals'. These are males and females whose income is at the 10th, 25th, 50th, 75th and 90th percentiles for each age group. For example, the income of 'Ms 10%' over a working life from 20 to 65 years is the 10th percentile of income for females in the appropriate age group. In other words, 'Ms 10%' earns more than the lowest 10% but less than the highest 90% of women at each age group. Similarly, 'Mr 75%' earns more than the lowest paid 75% of men in each age group, but less than the highest paid 25%.

The earnings profiles of these 10 'individuals' are shown in Figures 3 and 4.

We see that the earnings profiles for women are much flatter than those for men. Between the ages of 25-29 and 30-34, women's earnings, apart from Ms 90%, decline. After age 30-34, women's income remains fairly constant for all income levels. Men's income, on the other hand, continues to rise until age 30-34 for all income levels, and for those of middle income and above (Mr 50%, Mr 75% and Mr 90%) keeps rising until age 45-49.

The earnings profiles overestimate women's lifetime earnings because they assume that women are in the paid work force continually from age 20 to age 60 or 65. As previously mentioned, however, there are substantial numbers of women not in paid work in all age groups.

It could be argued that the income profile for the lowest female income category, Ms 10%, is unrealistically low. Since both full time and part time work are used to calculate the income profiles, the lowest incomes are those derived from part time work. Ms 10% therefore represents a woman who works continuously from age 20 to age 60 or 65 in low paid part time work. It may well be the case that this is not a usual working pattern and that a more usual pattern is for women work full time at least for some part of their paid working lives. In this case, Ms 10%'s income is too low, but, by the same reasoning, all the other female income profiles are too high.

Figure 5 allows comparison of male and female earnings profiles. We note that Mr 75% earns more than Ms 90% at most ages, that Mr 50% mostly earns more than Ms 75% and that Ms 25% and Ms 10% earn less than Mr10%.

Figure 3 Male weekly earnings by age, selected percentiles, August 1995

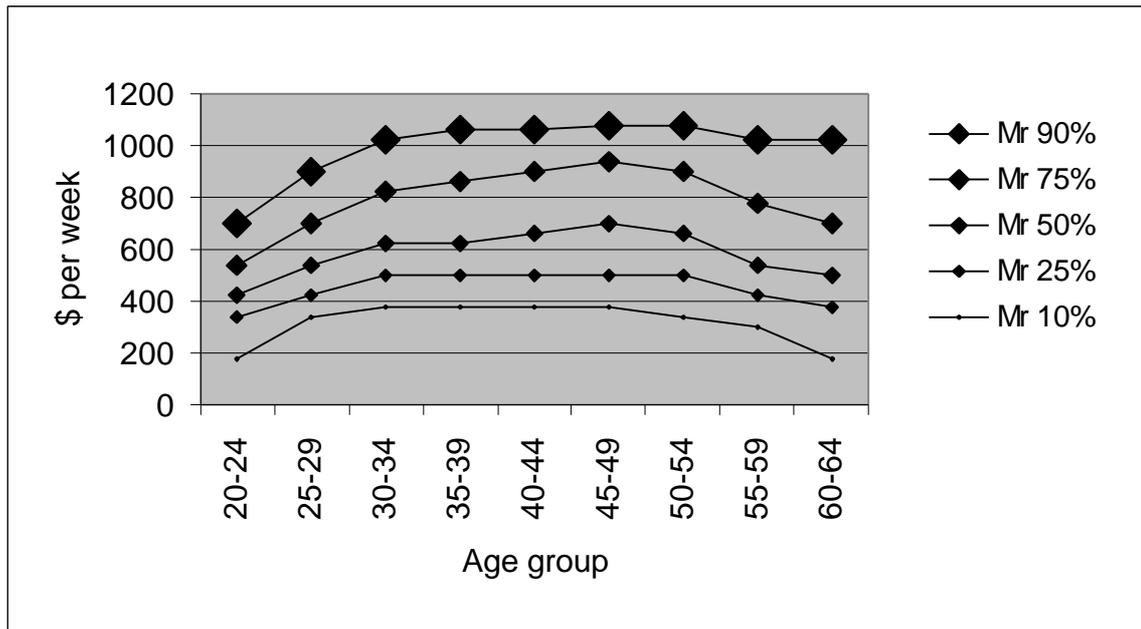


Figure 4 Female weekly earnings by age, selected percentiles, August 1995

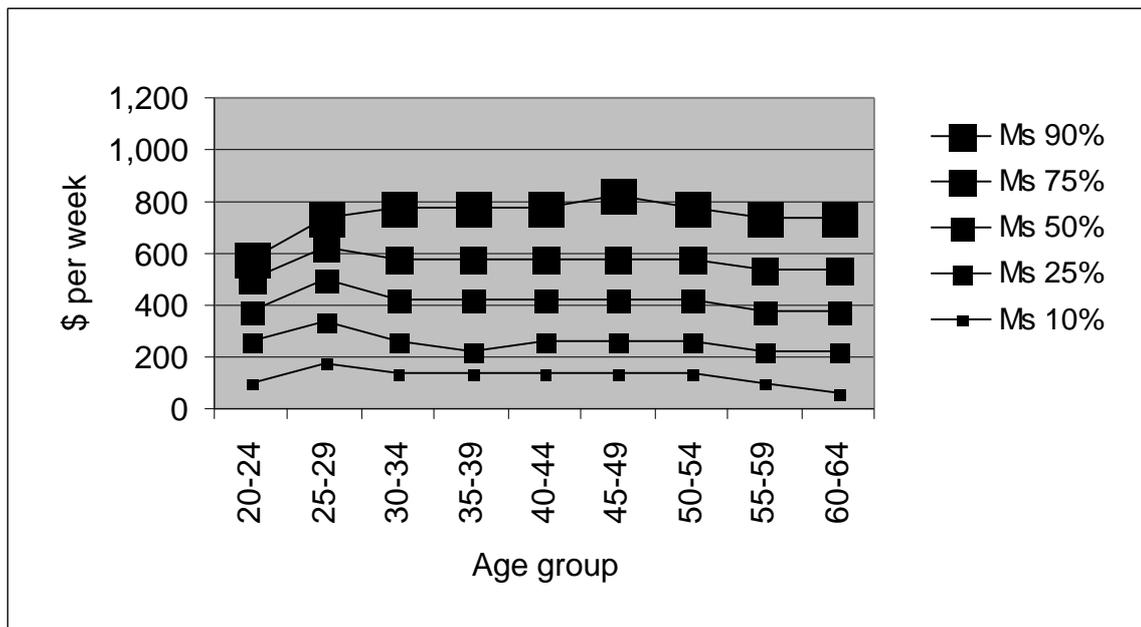
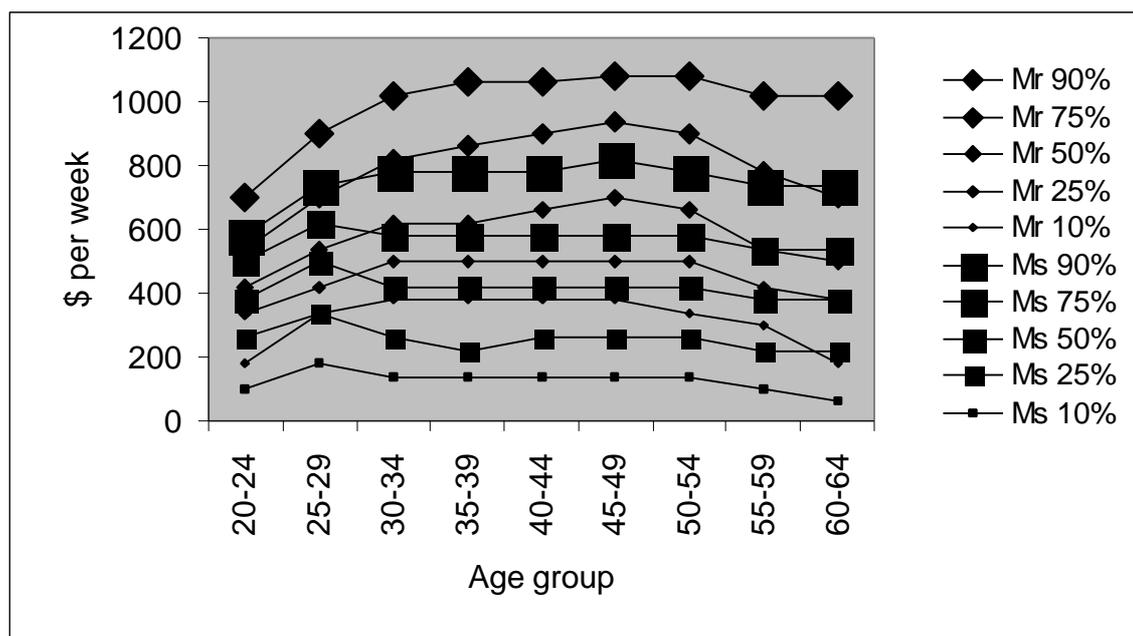


Figure 5 Male and female earnings by age, selected percentiles, August 1995



The superannuation calculations

It is assumed that the amount contributed to superannuation in each working year is 12% of the person's salary. 3% is contributed by the person and 9% by the employer. The employer's contribution is taxed at the current rate of 15%. Given that the present federal government has abolished the 3% compulsory employee contribution, it is likely that many people, particularly those on low incomes, will *not* contribute 3% of their income to superannuation. In this case, the retirement income estimates in this paper will be overestimates.

During each person's working life, it is assumed that the accumulated amount of superannuation earns the same amount of interest annually. Because the total amount of superannuation that is accumulated is very sensitive to this interest rate, results are presented for a range of interest rates, from 1% to 8%. As this paper assumes a zero inflation rate, the rate of return which is earned on the accumulated superannuation is a real rate, ie the rate which would apply after taking inflation into account.

The annual interest income from the accumulated superannuation is taxed at the rate of 7.5%. This corresponds to the current tax rate of 15% on super fund earnings, after allowing for the effects of dividend imputation.

In order to simplify the analysis, this paper assumes a zero inflation rate. This is not really a problem, since the main focus of the paper is comparison between groups and inflation may be assumed to affect all groups in a similar way.

The outcome measure

At retirement, it is assumed that a lifetime inflation-indexed annuity is purchased using the total amount of accumulated superannuation. The cost of such an annuity varies quite markedly depending on the life insurance company from which it is purchased. Figure 6 shows the range of annuity amounts which could be purchased with \$100,000 as at August 1997. As can be seen, there is a difference of more than \$1,500 per year between the highest and lowest annual indexed annuity in each of the four categories. This paper uses the average of the highest and lowest (as shown in the table). Due to their lower average life expectancy, men are able to purchase a larger annuity with a given sum of money than women.

Figure 6 Annual value of inflation-indexed annuity, purchase price \$100,000

		Purchased at age 60	Purchased at age 65
Males	Smallest annuity (Colonial)	\$5,654	\$6,816
	Largest annuity (National Mutual)	\$7,310	\$8,599
	Average annuity	\$6,482	\$7,708
Females	Smallest annuity (Colonial)	\$4,642	\$5,522
	Largest annuity (AMP)	\$6,534	\$7,367
	Average annuity	\$5,588	\$6,445

Source: Annuity & Pension League Table, August 1997, Rice Kachor Research

The annuity which could be purchased with the accumulated superannuation is then compared with the value of the single aged pension. The outcome measure which is shown in the results is the multiple of the single aged pension which could be purchased with the accumulated superannuation. Thus, a value of less than one means that a person's superannuation would provide a retirement income of less than the aged pension.

Again, in order to simplify the analysis, this paper assumes that there is no overall real growth in incomes. To the extent that the paper focusses on comparison between men and women of different income groups, this assumption is reasonable. When looking at the adequacy of retirement income, however, there will obviously be different results if there has been real income growth in the course of the working life than if there has been none. Comparing retirement income to the age pension overcomes this problem to a certain extent if it assumed that the age pension continues to be indexed at 25% of average weekly earnings (as at present). If 25% of average weekly earnings (regardless of changes in the real value of weekly earnings) is considered to provide a reasonable standard of living in retirement, then the effects of real income increases can be ignored.

Results

1. Comparison of male and female retirement income assuming continuous paid work from age 20 to 60 or 65

The results presented in this section assume superannuation contributions made on the basis of continuous paid work beginning at age 20 and ending at age 60 or 65. As previously noted, the results may overestimate retirement incomes, especially for those on lower incomes, because a 3% employee contribution is assumed (in addition to the 9% employer contribution).

Figures 7 to 11 show the predicted retirement incomes for men and women at each of the selected income levels. The results shown are based on the average cost of purchasing an lifetime inflation-linked annuity. The small vertical lines on the data points indicate the upper and lower limits of retirement income based on the highest and lowest priced annuities (see Figure 6).

It is evident that the amount of retirement income is very dependent on the rate of return earned on superannuation during working years. For instance, from Figure 7 we see that for Mr 10%, if he retires at 65, a rate of return of 1% during working years yields a retirement income that is only one fifth the size of the retirement income if the rate of return is 8%. (Less than the age pension in the one case and more than five times the age pension in the other.) In terms of producing a retirement income which is higher than the present age pension, the rate of return is more critical for low income earners, and hence for many women, than for higher income earners. Historically, the average rate of return has been around 5% per year.

We see from the figures that men's retirement income is generally about 50% higher than that of women in the corresponding income level. For instance, with a rate of return on superannuation of 5% during working life, the retirement income of Mr 50% is more than 4 times the age pension, compared with Ms 50%'s retirement income of less than 3 times the age pension, if both retire at age 65. If they both retire at 60, Ms 50% gets a retirement income less than twice the age pension, compared to just under 3 times the age pension for Mr 50%. (Figure 9)

From Figures 9, 10 and 11, we see that for Mr and Ms 50%, 75% and 90%, if men retire at age 60 they receive approximately the same retirement income as women who work until age 65.

Looking at the retirement incomes of the different income groups, we see that Ms 10% is unlikely to achieve an adequate retirement income, especially if she retires at age 60. Even with a sustained rate of return of 8% on superannuation assets over her entire working life, Ms 10% would receive a retirement income of less than twice the age pension if she retired at 65, and little more than the age pension if she retired at 60. Although Mr 10% receives more retirement income than Ms 10%, if he retires at age 60 and the rate of return on his super is 5% during his working life, his retirement income is little more than the age pension.

Ms 25% would receive less than twice the age pension if she works until age 65, with a 5% rate of return on her superannuation fund. If she retires at age 60, she would only receive the equivalent of the present age pension (without the fringe benefits).

With a 5% return on superannuation assets during their working lifetimes, Ms 50%, Ms75% and Ms 90% would receive a little under three times the age pension, a little under four times the age pension and about 4 ½ times the age pension respectively, if they work until 65. If they retire at 60, they receive a little under double the age pension, about 2 ½ times the age pension, and three times the age pension respectively. As is evident from Figure 2, in 1995, most women had left the paid work force by the age of 60, with very many leaving before age 55.

Figure 7 Retirement income of Mr and Ms 10%, continuous paid work starting at age 20, retirement at 60 or 65

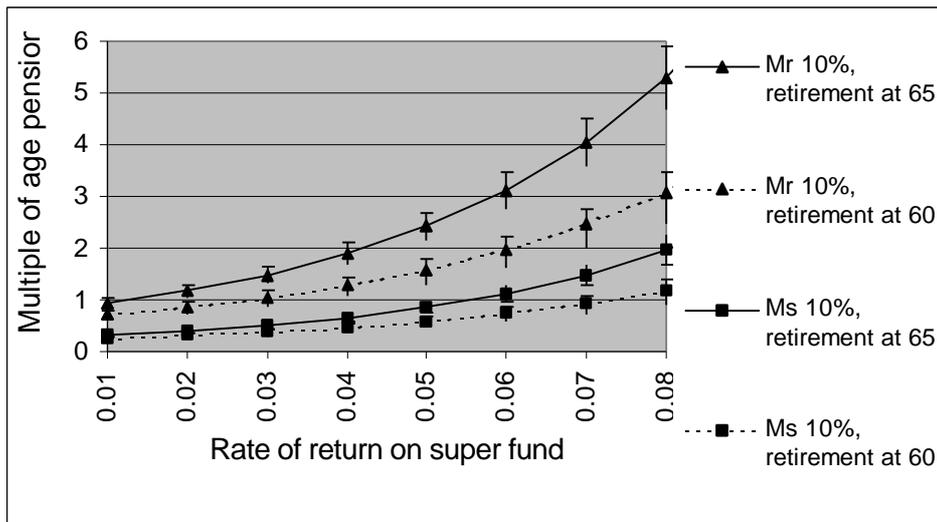


Figure 8 Retirement income of Mr and Ms 25%, continuous paid work starting at age 20, retirement at 60 or 65

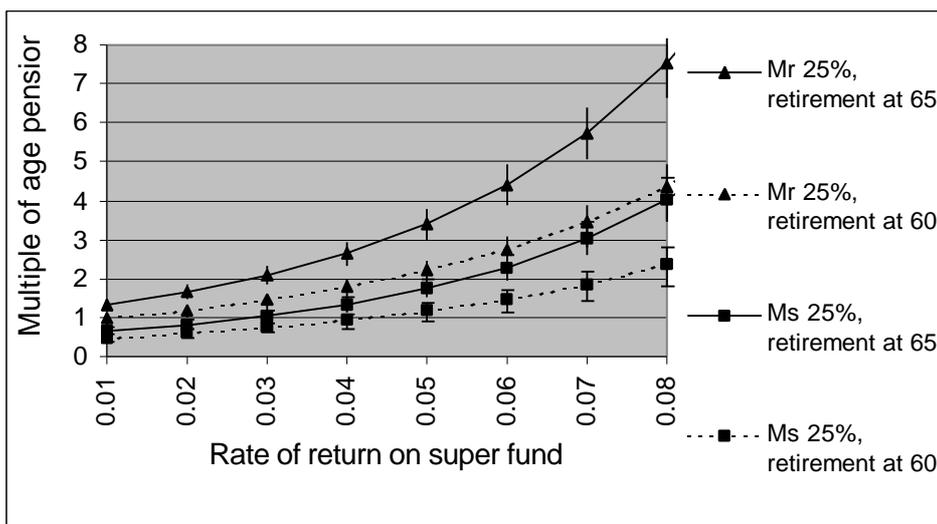


Figure 9 Retirement income of Mr and Ms 50%, continuous paid work starting at age 20, retirement at 60 or 65

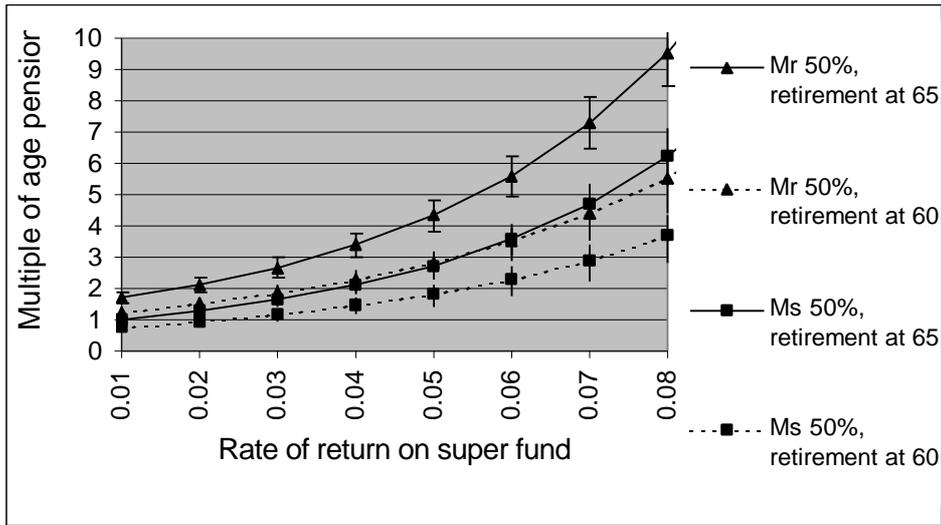


Figure 10 Retirement income of Mr and Ms 75%, continuous paid work starting at age 20, retirement at 60 or 65

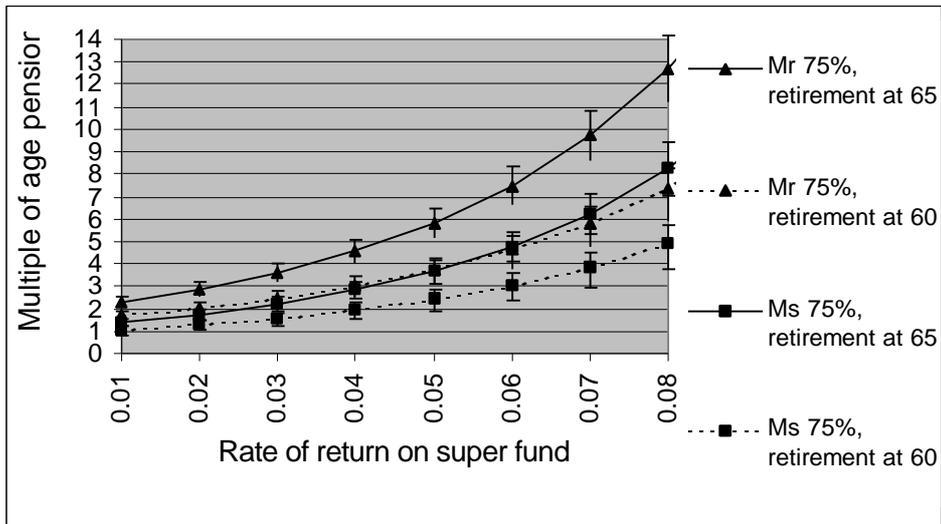
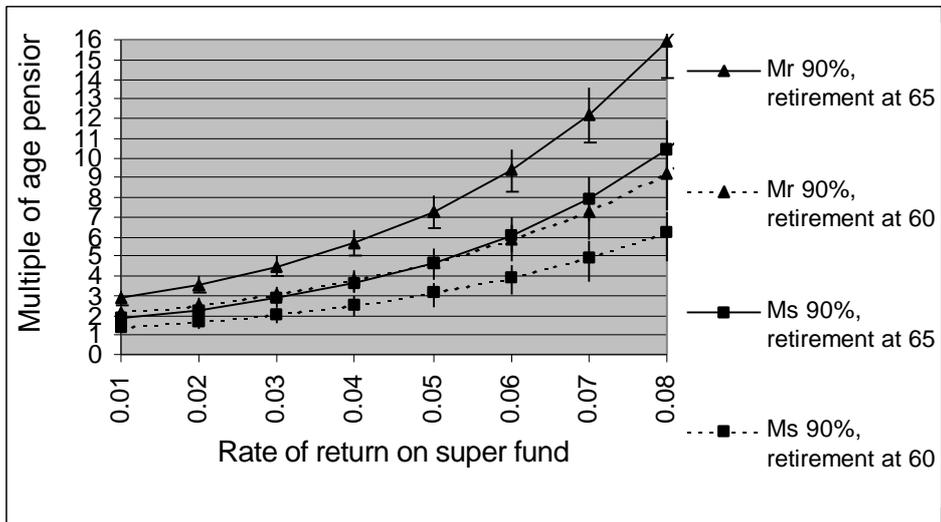


Figure 11 Retirement income of Mr and Ms 90%, continuous paid work starting at age 20, retirement at 60 or 65



2. The effect of breaks from the paid work force on women's retirement incomes

The results presented in the previous section overestimate the retirement income that women will receive from superannuation contributions because they assume continuous paid work from age 20 until 60 or 65. Most Australian women do not have this type of unbroken paid work career. It is clear that at all working ages there are substantial numbers of women not in paid work, but because of the lack of longitudinal data we do not know what are typical patterns of breaks from paid work in the population as a whole. In this section of the paper, three examples have been selected to illustrate how breaks from paid work affect women's retirement income. Each example involves a 5 year break from paid work. In the first example this break is from 25 to 29 years, in the second from 30 to 34 years, and from 35 to 39 years in the third. These are typical ages at which women temporarily leave paid work in order to have children. As in the previous section, it is assumed that women begin paid work at 20, and that they have continuous paid work after the five year break until age 60 or 65.

In this section, the results presented assume that the annual rate of interest on the accumulated superannuation during working years is 5%.

The results for women in the five income levels are shown in Figures 12 to 16. It is clear that the earlier the break in paid work, the greater the reduction in retirement income. A break from paid work in a woman's late twenties reduces her retirement income more than a break in her early or late thirties. The later the break, the less impact it has on retirement income. This is due to the fact that money contributed early in a person's lifetime accrues more compound interest and hence is worth more at retirement than the same amount of money contributed in later years.

For Ms 10%, a five year break from paid work results in a retirement income which is an even smaller fraction of the age pension than the income she would receive with continuous superannuation contributions from age 20 to 65.

If Ms 25% has a five year break from paid work in her late twenties, her retirement income is very little more than the age pension if she works until age 65 and below the age pension if she retires at 60.

A five year break from 25 to 29 reduces Ms 50%'s retirement income to double the age pension if she works until 65 and less than 1 ½ times the age pension if she only works until age 60.

Even for Ms 75% and Ms 90%, a five year break in their late twenties and retirement at age 60 provides a retirement income of only around double the age pension.

Thus, for women in the lower half of incomes, a break of 5 years in their late twenties, combined with retirement at age 60 means that their retirement incomes will be virtually the same as the current age pension. The current superannuation arrangements therefore encourage women to have continuous paid work, or, if they have breaks from paid work, to have these breaks as late as possible. It is not clear that this is a desirable situation, especially if it means that increasing numbers of women defer having children until they are in their late thirties as problems related to pregnancy, particularly infertility, are much more likely after the age of thirty five.

Figure 12 Retirement income of Ms 10%, 5 year break from paid work at different ages, retirement at 60 or 65

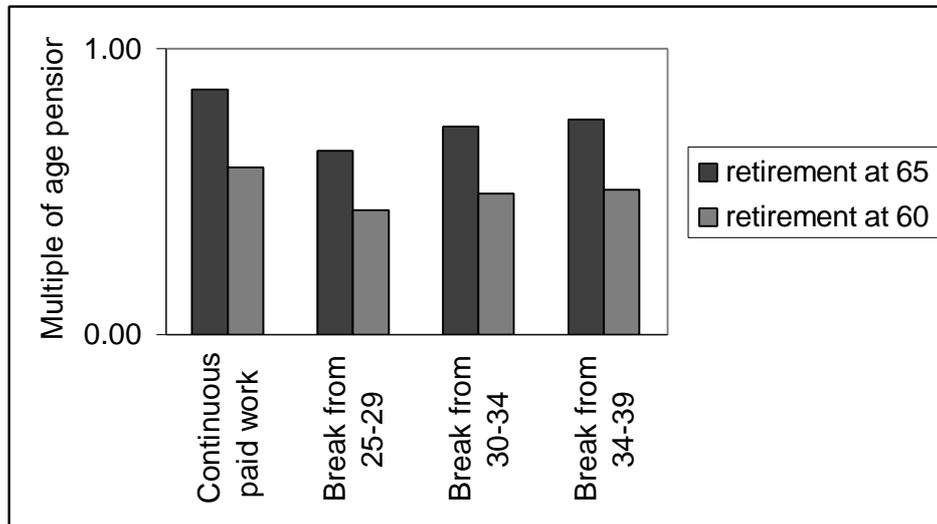


Figure 13 Retirement income of Ms 25%, 5 year break from paid work at different ages, retirement at 60 or 65

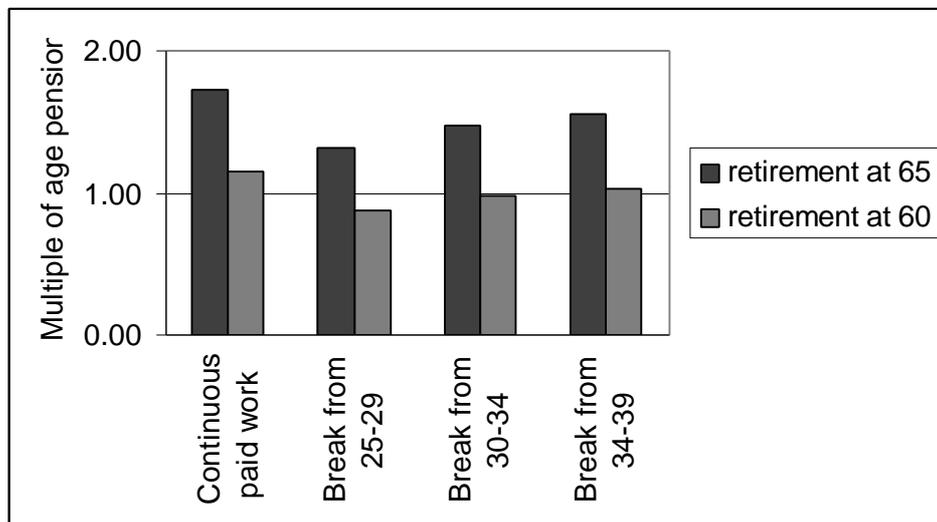


Figure 14 Retirement income of Ms 50%, 5 year break from paid work at different ages, retirement at 60 or 65

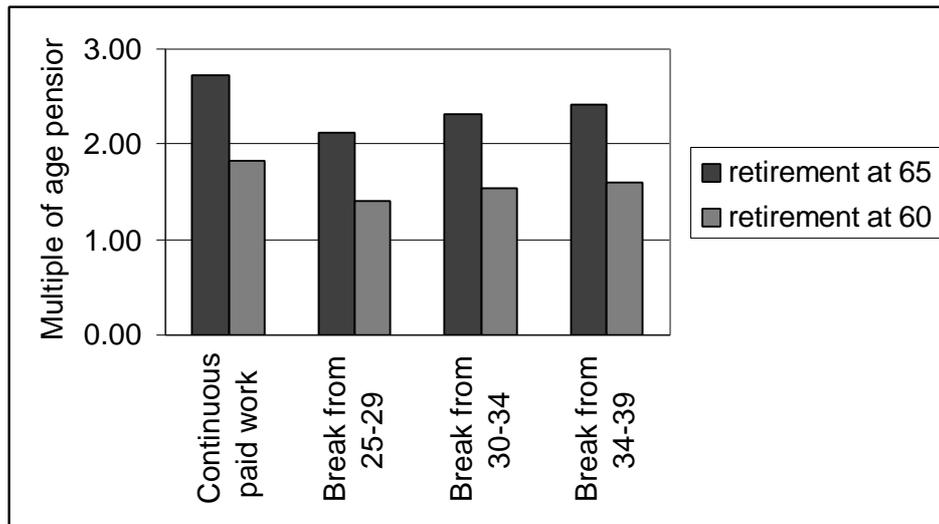


Figure 15 Retirement income of Ms 75%, 5 year break from paid work at different ages, retirement at 60 or 65

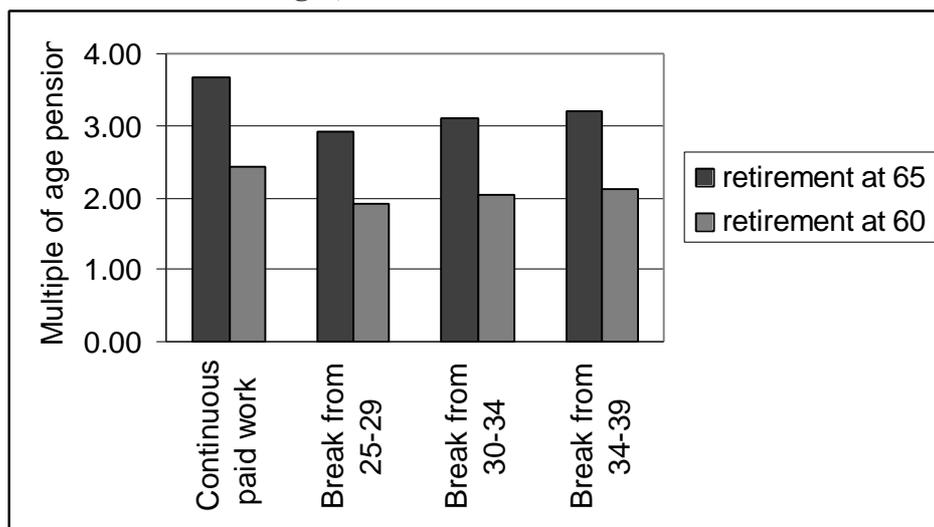
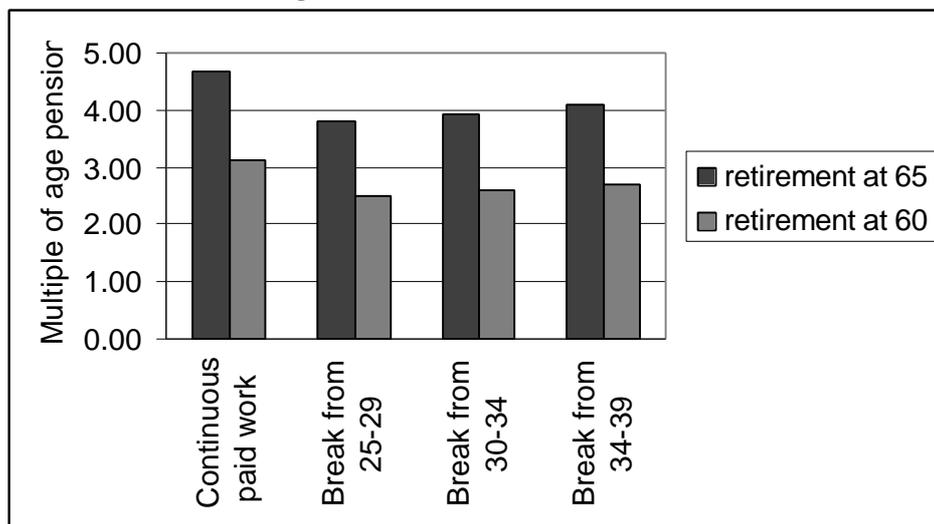


Figure 16 Retirement income of Ms 90%, 5 year break from paid work at different ages, retirement at 60 or 65



3. Beginning superannuation contributions at 30, 35 or 40: the effect on women's retirement income

This section of the paper presents estimates of the retirement incomes of women who begin superannuation contributions at age 30, 35, or 40 and then make continuous contributions until age 60 or 65. As in the previous section, the results assume that the rate of return on the superannuation during working years is 5% per annum.

Predicted retirement incomes for women at each of the selected income levels are shown in Figures 17 to 21. In each figure, the retirement income produced by continuous paid work beginning at age 20 is shown for comparison.

As is clear from the Figures, delaying superannuation contributions until even age 30 produces a dramatic reduction in retirement income. This is true at all levels of income.

Ms 10% would receive a retirement income of less than the age pension even with continuous superannuation contributions from age 20 to 65, so beginning contributions at 30 or later results in a very small retirement income.

If Ms 25% begins superannuation contributions at 30, her retirement income is less than the age pension even if she continues paid work until age 65. Beginning superannuation payments at age 35 or 40 further reduces this retirement income.

For Ms 50%, beginning superannuation contributions at 30 results in a retirement income around 1 ½ times the age pension if she works continuously until 65. Retirement at 60, however, results in a retirement income the same as the age pension. If she begins superannuation payments at 35, her retirement income will be just over the pension if she works till 65, but well under it if she stops paid work at 60.

Ms 75% and Ms 90% receive twice and three times the age pension respectively if they begin superannuation contributions at 30 and work until 65. Starting contributions at 35 produces a retirement income of 1 ½ times the pension for Ms 75% and twice the pension for Ms 90%, providing they continue working until 65. Retiring at 60 produces an income little more than the pension.

Even for Ms 90%, beginning superannuation contributions at 40 results in a retirement income of only 1 ½ times the pension if she works till 65. Retiring at 60 means results in a retirement income equal to the pension.

It is clear, therefore, that for the overwhelming majority of women, beginning superannuation contributions at 40, or even 35, years of age, will result in an inadequate retirement income even if they contribute continuously until 65.

Figure 17 Retirement income of Ms 10%, superannuation payments started at 30, 35, 40, retirement at 60 or 65

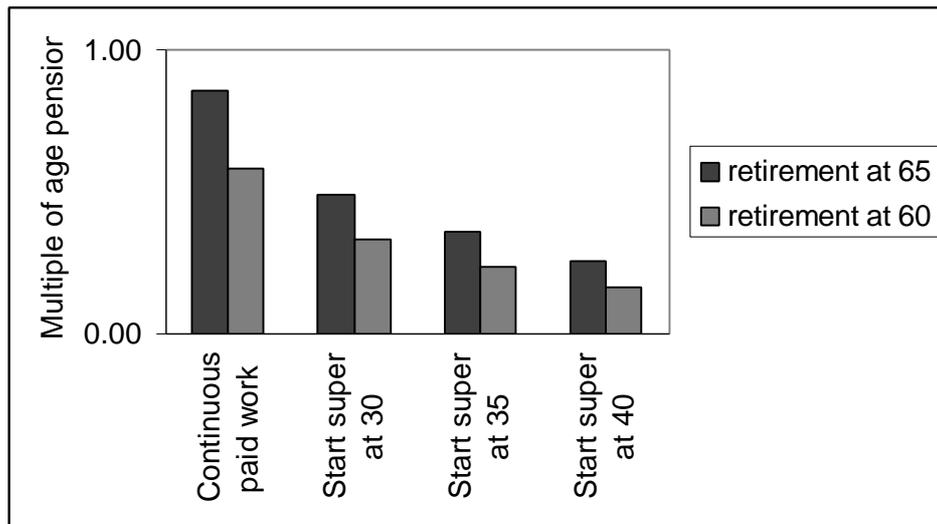


Figure 18 Retirement income of Ms 25%, superannuation payments started at 30, 35, 40, retirement at 60 or 65

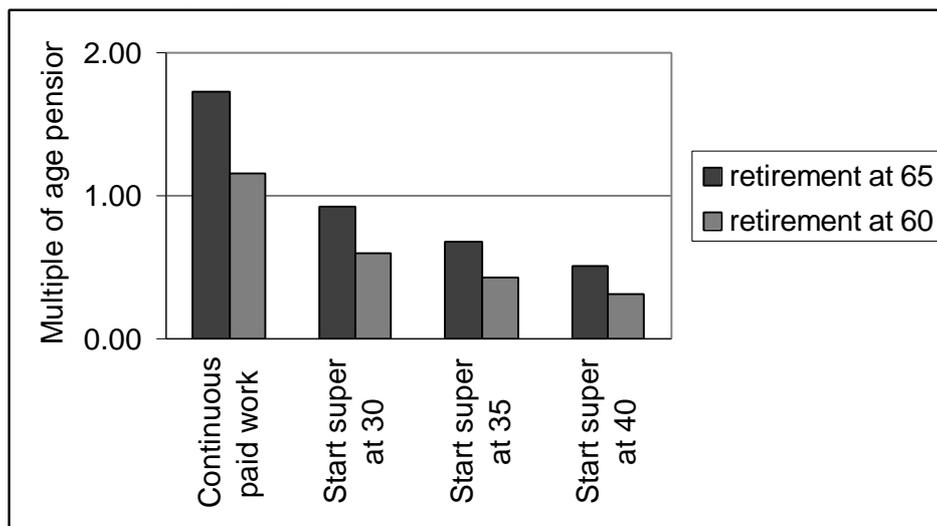


Figure 19 Retirement income of Ms 50%, super annuation payments started at 30, 35, 40, retirement at 60 or 65

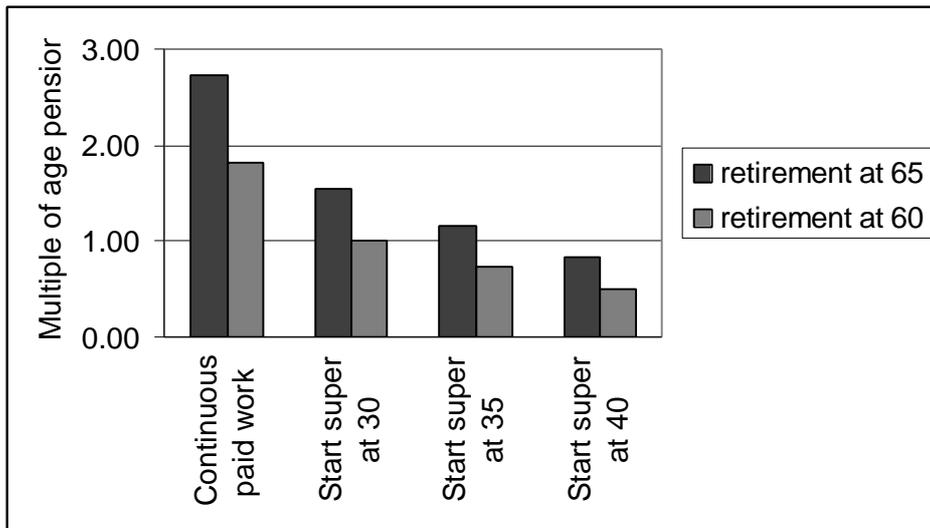


Figure 20 Retirement income of Ms 75%, superannuation payments started at 30, 35, 40, retirement at 60 or 65

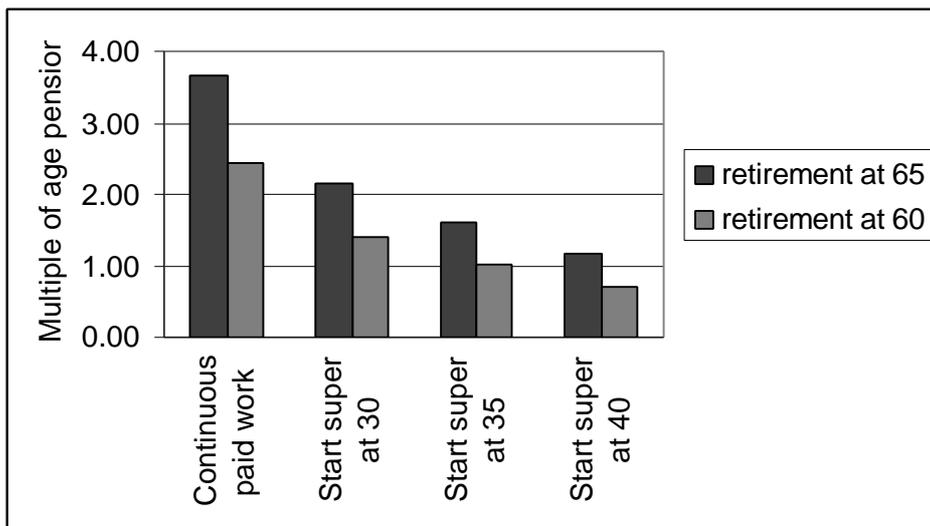
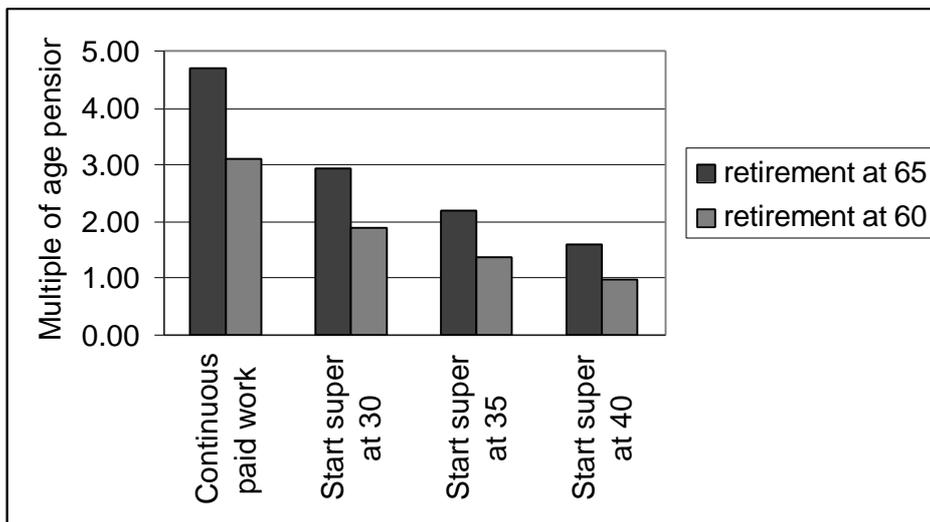


Figure 21 Retirement income of Ms 90%, superannuation payments started at 30, 35, 40, retirement at 60 or 65



Conclusion

It is clear from the results presented in this paper that the current Australian superannuation system will provide very low retirement incomes for large numbers of women. In order to have a reasonable standard of living in old age, most women will have to continue to rely on other sources of income, generally the age pension and/or their partner's income. If the availability of the age pension is further restricted or if its value does not increase in line with inflation many older women will face a bleak financial future. As David Knox (1994) has argued, a major problem with the present retirement income arrangements is that superannuation is poorly integrated with the age pension. This produces particularly adverse effects for low income earners because even though their accumulated superannuation is not really adequate to live on, it is enough to substantially reduce the amount of age pension they receive. In the present system, many women will sacrifice salary during working years but will still be dependent on the age pension in retirement.

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