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Abstract:

Our object is to identify biases favouring early retirement in the Australian taxation system. An examination of stylized facts about labour force participation and retirement show a sharp decline in the participation of men aged 60-64 years while that of other male age groups is steady through time. By contrast the participation of females trends up across all age groups. The reliance of the 65 plus age group on age government pensions and superannuation benefits is almost 80 percent. As might be expected the probability or expectation of being in work after age 75 declines with age; however retirement decisions appear to be motivated by accessibility to retirement benefits. We develop a simulation model explaining the accrual of social security wealth gained from working one year beyond retirement and from this calculate an implicit tax rate on additional work. We find that the current Australian tax on retirement benefits is biased in favour of ages 59 and less, while the implicit rate is positive on retirement past 59. We speculate about the effects on these biases of exempting end superannuation benefits from tax and of removing reasonable benefit limits. These tax change effects constitute a further research agenda.

Key words: *Retirement intentions, implicit tax, Social security wealth*

JEL codes: *I38, J26*

1. Introduction

The demographic prognosis for the 21st century is that all national populations will age structurally and most in the developed world will ultimately decline in size. Australia is unexceptional, and one often stated concern is that the social security systems of nations like Australia will not be sustainable in their present form because the next generation will not be able to raise enough taxes to support the burgeoning pension's bill. These intergenerational financial pressures are compounded by another trend, namely, that over the past fifteen years employees have been leaving the workforce at ages well below the now-defunct 'official' retirement age, 65 years. In Australia and other nations this decline in labour force participation has been partly explained by generous social security provisions.

Our objective in this study is to identify the effects of current Australian social security provisions on labour force participation and individual retirement decisions. The study culminates in the calculation of an implicit tax rate on retirement benefits. Clearly, if the hypothesis that retirement benefits are reduced by current retirement provisions is proven, then the implicit tax is positive, but if benefits are enhanced by retirement provisions then the implicit tax is negative, constituting a subsidy paid to early retirees. This is clearly a perverse result given that policy intent now favors keeping older workers at work. The prior expectation is that implicit tax rates are negative for younger retirees and positive for older retirees. The details of the calculated implicit tax rate are outlined in the third section of this paper where the methodology and data are also discussed.

Although the literature pertaining to the effects of population ageing on the economy is profuse, there are only a few studies which quantity the effects of social security provisions

on retirement intentions. A seminal piece was assembled by Garber and Wise (1999). This is a study of the relationships between social security plans and retirement patterns in eleven countries: Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, UK and USA. The authors of the individual country studies are shown on the list of references. Our study is based on the foundation designed by Gruber and Wise. Three features stand out from these 11 individual studies: first, there is a strong relationship between what can be defined as 'early' and 'normal' retirement ages, and actual exit from the workforce. 'Early' retirement typically occurs in an individual's mid-fifties when superannuation benefits (not government pensions are accessible for the first time). 'Normal' retirement typically occurs around age 65, while 'actual' exit typically falls somewhere between the two. Second, existing social service provisions are placing a tax burden on working beyond early retirement ages, thus providing an incentive for early retirement. Third, the tax incentive for early retirement varies remarkably across countries.

Gruber and Wise (1999, Table 1, p29) summarize these implicit tax rates on earnings derived from working beyond the early retirement ages along with statistics about labour force participation and unused labour capacity. The eleven-nation average of the implicit tax rate on earnings after retirement is 50.3 percent. This means that those who continue to work beyond the retirement age are taxed at 50% on additional earnings.

The current study focuses exclusively on Australian data applied to a slight modification of the Gruber and Wise (1999) approach. The study is designed to examine the nature of retirement incentives confronting single person and couple households. This classification reflects the structures of Household Wealth and Income survey on which this study is based.

The survey of the Household, Income and Labour Dynamics in Australia (HILDA) survey is focused on households. There is only a limited amount of data available for males and females individually and so there are no separate studies by gender in this paper except for the individual gender analysis of labour force participation given in Figures 1 and 2.

The following section summarises the Australian experience of labour force participation and relevant population parameters. The method of analysis, data series and characteristics are outlined in the third section, where the results of the study are also discussed. Policy issues and implications are addressed in Section four.

2. Stylized Facts about Labour Force Participation and Ageing

The central feature in this section is the presentation of descriptive data relating to Australia's labour participation and retirement patterns. The section begins with a description of the historical evolution of Australian labour force participation because the dramatic fall in male labour force participation rates over the past three decades provides the primary motivation for the analysis. We then describe the decline in labour force participation by age group which is reflected in current labour force patterns. Finally we present data on the current age-specific activities and income sources of men and woman and examine the evidence about retirement intentions.

i) Labour Force Participation

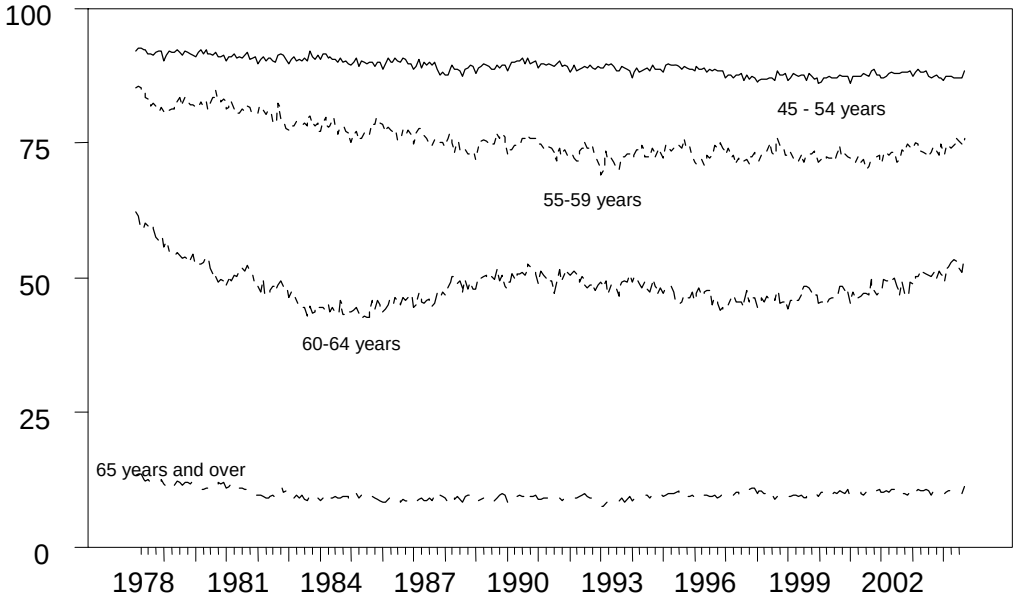
The Australian labour force participation rates of men and women by age group are shown on Figures 1 and 2. The salient feature of Figure 1 is the sharply declining labour force

participation of men in the 60-64 year age group, whose participation rate falls from 60.0 percent in 1978 to 47 percent in 1988. Participation increases in 1989, returning to 50 percent by 1992, after which there is a slight dip in the rate following the recession of 1990-1992. At 55-59 years participation falls steadily from its peak of 85 percent in 1978 to a low of 70 percent in 2002. The participation rate for other age groups is steadier. For example, the participation rate of 65 plus year old males has hovered around 10 percent with limited deviation, while that of the 45-54 age group has similarly remained fairly steady around 88 to 90 percent. So the stand-out age categories are the 55-59 and 60-64 year groups. All four age-group time-series reflect the effects of cyclical variation as recessions in 1980-82 and again in 1990-92 accompany an acceleration of the fall in male labour force participation. However, the steady decline of labour force participation in the 1990s among 55-59 year old males may be associated with a bias favouring early retirement. Thus, the evidence suggests that further analysis of male participation among the 55-59 and 60-64 age groups is warranted.

According to the evidence provided on Figure 2, female labour force participation has increased in all age categories. The story from this figure is similar irrespective of the age group under examination. Female labour force participation is in a steady state for the period 1978 to 1985, whereafter all three female age groups experience accelerated participation. Participation rates for the 45-54 year age group rise from 47 percent in 1986 to 75 percent in 2004. At 55-59 years participation rises from 30 percent in 1986 to 53 percent in 2004, while that for 60-64 year old females differs markedly from the male rate: rising from 10 percent in 1986 to 32 percent in 2004.

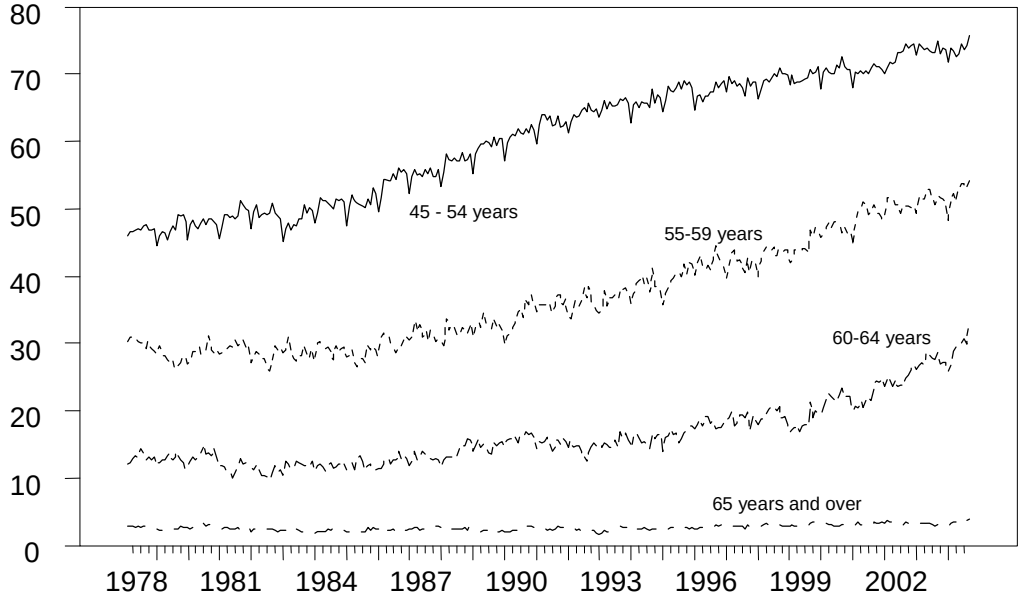
Finally, the 65 plus female age group participation rate hovers around 2 to 3 percent throughout the period 1978-2004. This historical evaluation suggests markedly different behaviors for males and females. In the case of males, there is some evidence of cyclical influences on participation, although it is clear that the long term downward trend in 50-59 year male participation may be explained by biases towards early retirement. It is this issue, which is evaluated in the following analysis.

Figure 1 Historical trends in the LFP rate of men



Data source: Table 01. Labour force status by social marital status, age and sex 6291.0.55.001 Labour Force, Australia, Detailed - Electronic Delivery, Australian Bureau of Statistics.

Figure 2 Historical trends in the LFP rate of women



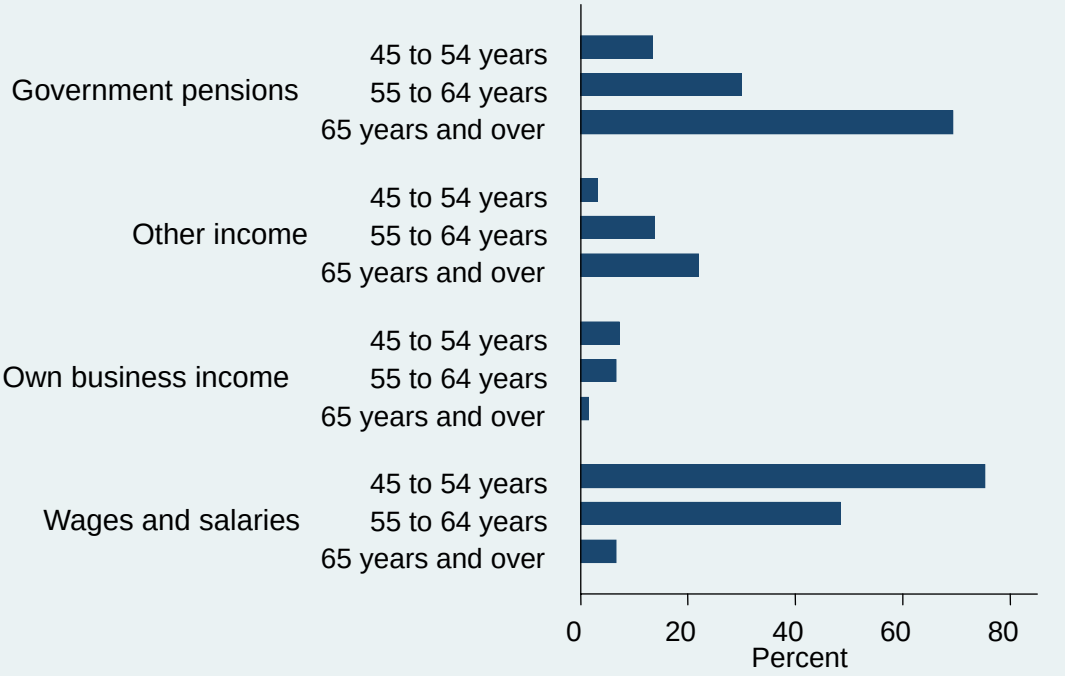
Data source: Table 01. Labour force status by social marital status, age and sex 6291.0.55.001 Labour Force, Australia, Detailed - Electronic Delivery, Australian Bureau of Statistics.

ii) Sources of Income and Age Specific Characteristics

A further preliminary consideration is the significance of the various sources of household income for particular age groups. An analysis of income sources provides a context for the study of retirement income biases which is of growing importance given the increasing reliance of individuals upon retirement incomes. The contribution of various sources of household income is shown in Figure 3. Wages and salaries as an income source explained 75 percent of household income for the 45-54 year age group, but wages and salaries funded less than 10 percent of household income for 65 plus age group. This elderly household age grouping derived almost 70 percent of household income from government pensions and allowances in 2004. These statistics are consistent with the details of employment status from the HILDA (2003) and reveal a sharp decline in full time employment as employee's age. Nearly 20 percent of people aged 55 are in full time

employment while a negligible proportion of the 65 plus age group is so employed.

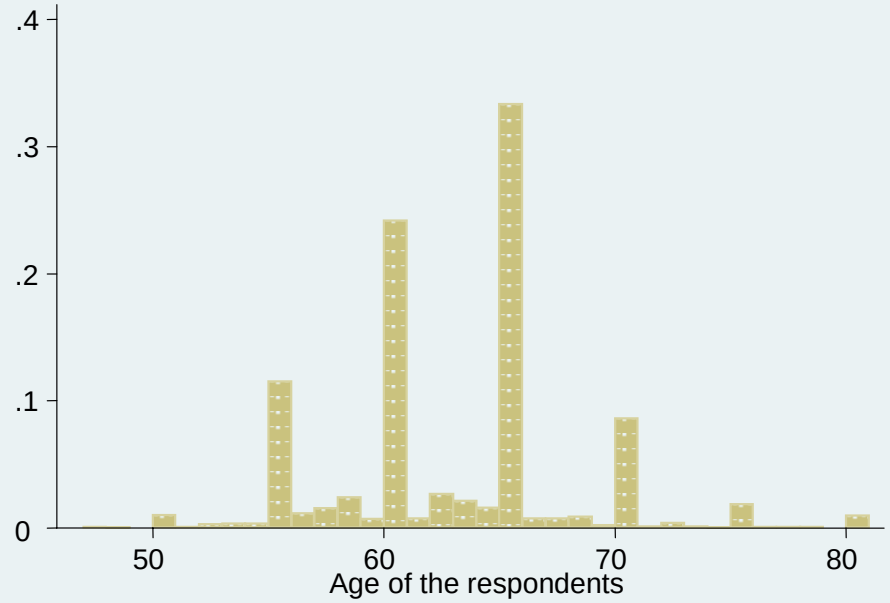
Figure 3 Australian Household income distribution (2003)



iii) Retirement Intentions

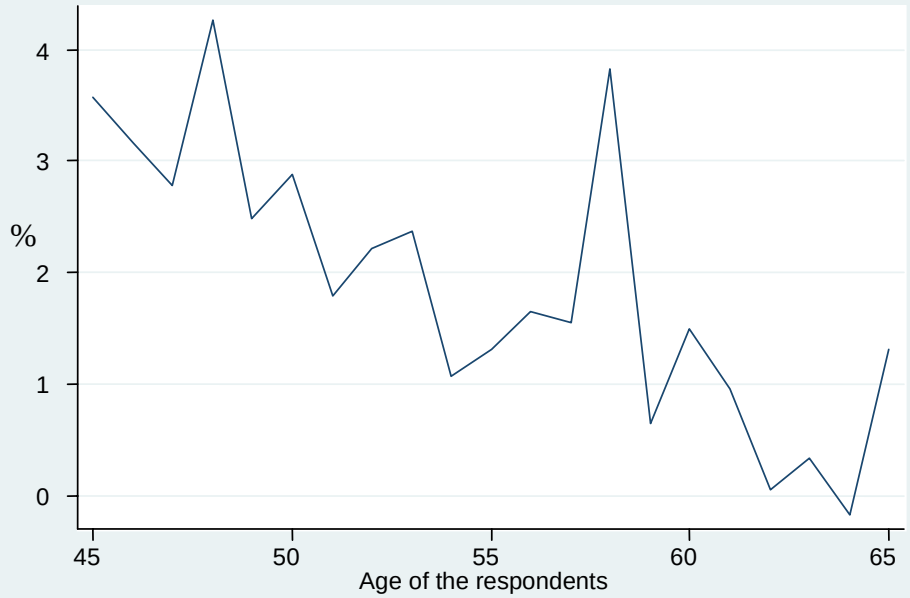
A central issue in any study of biases in retirement income policy is the retirement intentions of those approaching retirement age. Retirement intentions will determine the future course of government liability for pension entitlements. The HILDA (2003) survey findings constitute the basis for Figure 4, which summarizes the age at which individual survey respondents expect to retire fully. The two spikes in this sample occur at ages 60 and 65. This expected retirement age is influenced by an individual's income prospects in retirement (although it must be acknowledged that it also reflects the concept of clustering, whereby respondents 'round' the age at which they intend to retire). The HILDA (2003) survey provides probability beliefs of individual survey respondents about being in paid work after 75 years of age. These work expectations are indicated on Figure 5.

Figure 4 Probability of the age expected to retire completely (2003)



The probability that individuals will still be in paid work after age 75 varies by respondent age. It is largest at age 48 (over 4 per cent) with a second spike at age 58, while the level occurs at age 64, and in no case does the proportion exceed five per cent. A further significant characteristic of Figure 5 is that individual expectations of working beyond age 75 decline with age, suggesting that those closer to retirement have a better understanding of their intentions and financial prospects in retirement. Thus any survey of retirement intentions should especially focus on age groups closest to retirement.

Figure 5 The chance to be in paid work after age 75 (2003)



Note: Data are source from the HILDA survey (2003). There are total 2540 respondents aged 46-80.

The financial incentives for retirement depend upon arrangements for accessing superannuation and government pensions and entitlements. Pensions include age, service, widows and war widows and private retirement income sources include private superannuation plus income from private savings. However, superannuation and the government pension constitute the two major sources of retirement income. There are many explanations of the decision to retire including those cited in the HILDA (2003) survey as follows: individuals reach the eligibility age for a pension; their ability to access other forms of government pension; their ability to access superannuation funds; being made redundant; the effects of workplace stresses; the achievement of a secure financial position, the retirement of a partner; a decline in health status; the need to care for a spouse or family member and the desire to experience a different lifestyle.

The proportion of HILDA (2003) survey respondents indicating that “reaching the pension eligibility age” and “the ability to access superannuation entitlements” are important

determinants of their retirement decisions are shown for differing ages on Figures 6 and 7. At age 49 a maximum 72 percent of respondents thought “reaching the pension eligibility age” important in the selection of a retirement date (Figure 6). A capacity to access superannuation entitlements was viewed by more than 80 percent of HILDA (2003) respondents to be an important motivation for retirement. Figure 6 is notable also for the apparent decline in perceptions of these influences on retirement. By age 65 only 20 and 30 percent respectively of respondents stressed the importance of age pension eligibility and superannuation accessibility as factors explaining retirement. By that age it would appear that other influences such as wealth, life style, spousal retirement, financial security, and carer responsibility have taken over from pension eligibility and superannuation accessibility as primary motivations of the retirement decision. From Figure 6 and 7, it is clear the two outstanding motivators are pension eligibility and superannuation accessibility in the age group 50-65. Therefore, the retirement biases examined in this paper focus on these two characteristics.

Figure 6 Importance of reaching the pension eligibility age (2003)

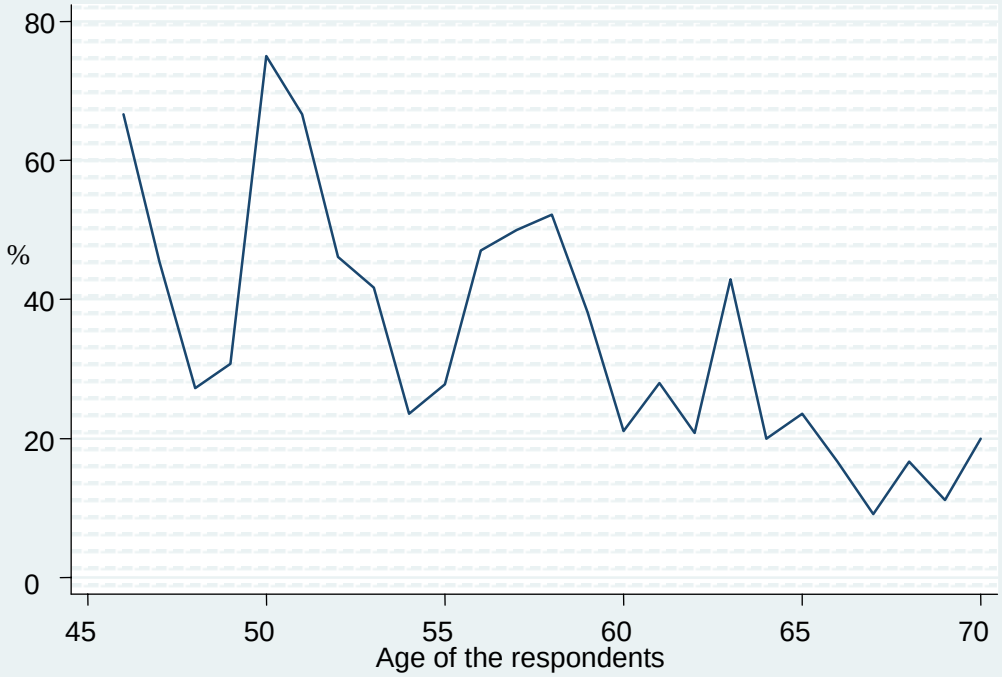
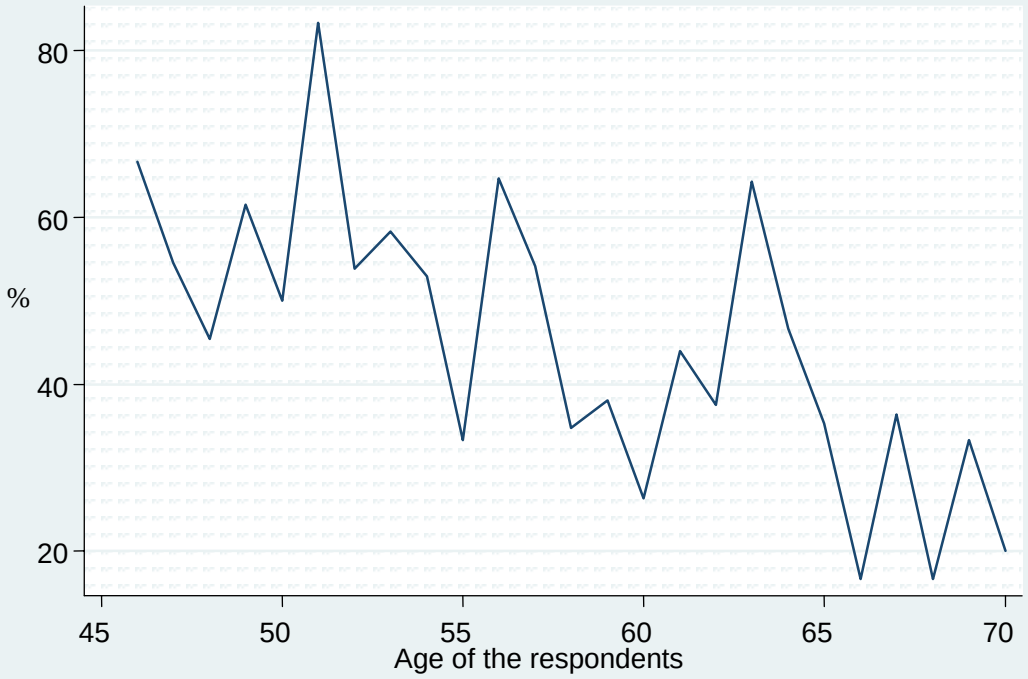


Figure 7 Importance of the ability to access super funds (2003)



III The incentive effects of plan provisions

iv) Australian Retirement Entitlement Provisions

Historically, Australian males have been able to access a government pension at age 65 and females at age 60, so these have become Australia's 'normal' retirement ages. However, changes have recently been made to the age of access for females; it is currently 62 years of age, and over the next decade it will rise to 65 years[1]. The lowest of these actual dates (55 years) therefore defines the prospect of early retirement for Australian workers and consequently this age has tended to become the early retirement age.

There are four types of superannuation available to Australians: a self employed personal scheme which allows a 100 percent tax deduction of investment in the scheme up to a maximum value of A$100,000 per annum. Second, employees receive at least 9 percent compulsory superannuation guarantee levy payment from their employer and also qualify for tax deductions up to A$5,000 annually on superannuation payments above 9 percent. Further, an employee may receive limited employer contributions less in value than 50 percent of the total contribution to individual superannuation plans. Finally, there are employer=-focused superannuation funds in which the employer contributes to the fund on behalf of employees. In this case, all tax deductions accrue to the employer subject to the employee maximum contribution.

These tax deductions are not accessible by employees receiving 50 percent or more of their total superannuation contributions from employers. In Australia, this applies to more than 50 percent of all employees. Superannuation issues are intertwined with Australian Industrial Relation structure. Many Australian workers were employed under the terms of

[1] People with private superannuation can also access their funds at age 55 if they were born prior to 1995 and age 60 if born past this date.

Award agreements which specified their rates of pay and work conditions. In recent years, individual workplace relations reform has involved the gradual reduction of Award conditions and their replacement by bargaining processes and agreements. In the latest round of IR reforms the goal is to implement a set of individual agreements known as Australian Workplace Agreements (AWA). However, the ongoing legacy of Australia's award system is the issue of Award Superannuation, which accounts for the largest part of the value of superannuation funds in Australia.

Many Australian retirement funds provide superannuation benefits in three forms: defined benefits, or accumulation fund benefits, or a combination of these. A defined benefit plan promises to pay a multiple of an employee's salary from the day of retirement. The multiple is determined by length of service and employer-specified characteristics. The alternative is an accumulation fund which receives both employer and employee superannuation contributions and all investment income earned on these funds. The retiree's entitlement is the total accumulated value in the fund at retirement. Accumulation funds are market linked while defined benefits obligate the fund to pay retirees regardless of the current market condition. For this reason, several Australian funds have closed their defined benefits plan to new participants.

Superannuation funds in Australia are currently taxed at three points: premiums are taxed as superannuation contributions when deposited; the income earned from the investment of these contributions is taxed, and end benefits are taxed. A special tax rate of 15 percent applies at all three points. However, the Australian federal budget for 2006/07 presaged the introduction of substantial reforms. From July 1 2007, the end benefit will be free of tax.

Further, the so-called Reasonable Benefit Limits (RBL) on both lump sum payments and pensions paid on retirement will not apply beyond the same date. Until now the RBL has imposed a limit on the value of lump sum payments and pension entitlement taxed at the 15% rate. Lump sums and pension entitlements exceeding these RBL were taxed at the full marginal rate.

v) Retirement Ages and Social Security Welfare

Two features of social security plans have an important effect on labour force participation incentives. The first is the age at which benefits become available. This is called the early retirement age, which as noted above is 55 years for workers claiming superannuation in Australia. The 'normal' retirement age is the age at which workers are eligible to claim the government-provided age pension, 62 years of age for women (if the worker turned 60 in 2003) and 65 for men. Since the main sources of funding for Australian retirement are the government pension and superannuation payout (see Figure 3), benefit entitlements mainly consist of these two components. Superannuation is prevalent among employer provided retirement schemes. In addition to these two social security plan provisions, other government and private programs may also affect the relationship between social security plan provisions and retirement ages. These include unemployment and disability insurance. This study does not cover these issues.

The extent to which people continue to work after the early retirement age is closely related to the second key feature of retirement plan provisions, the pattern of benefit accrual. Suppose that at a given age *a*, a person has acquired an entitlement to future benefits upon

retirement. The present discounted value of these benefits is the person's social security wealth at age *a*, which is labeled SSW_a. The key consideration for retirement decisions is how this wealth will evolve with continued work. If a person is aged 59 years, for example, what is the change in *SSW* if he/she retires at age 60 instead of age 59? The difference between SSW if retirement is at age *a* and *SSW* if retirement is at age *a+1*: $SSW_{a+1} - SSW_a$, is called the SSW accrual. We compare the SSW accrual to net wage earnings over the year after the retirement date. If the accrual is positive it adds to total compensation from working the additional years, if the accrual is negative, it reduces total compensation. More details about this ratio are provided in the following paragraphs where it is defined as an implicit tax on earnings from continuing work.

vi) Simulation Modelling

A model of social security benefit determination is used to assess the impact of social security on retirement through accrual rate effects.

This analysis is based on a project linking social security provisions and labour supply conducted in the program on the Economics of Ageing at the National Bureau of Economic Research- see Gruber and Wise (1999). The modelling has been changed slightly to accommodate Australian ageing experiences and the availability of Australian data.

An individual's social security wealth evaluated at age a_0 and retirement age *r* [$SSW(a_0, r)$] is composed of the present value at age a_0 of future social security benefits if retirement occurs at age *r* [$PB(a)$][2] minus the present value of social security contributions at age a_0 until retirement at age *r*

[2] Data on workers' after-tax pensions (B(*a*)) including government-provided pension (mainly age pension) and employer-provided pension (mainly superannuation) are obtained from the HILDA survey (2003).

$[\,SSC(a_{0,}r)\,]$[3]:

$$SSW(a_{0,}r) = PB(a_{0,}r) - SSC(a_{0,}r) \qquad (1)$$

This is a simplified version of a model proposed by Gruber and Wise (1999) who add to $SSW(a_{0,}r)$ the present value of survivor benefits at age a_0 if the worker dies. We were unable to observe the amount of survivor benefits at spouse's age, thus our calculation refers to *SSW* accrued by the individual without considering survivor benefits. Not all retirees have survivor benefits either because their superannuation entitlements do not provide for survivor benefits, or because they have no surviving beneficiaries.

$PB(a_{0,}r)$ is defined in the following manner:

$$PB(a_{0,}r) = \sum_{a=r}^{a=\max} P(a)B(a)\frac{1}{(1+\rho)^{a-a_0}} \qquad (2)$$

The pension benefit is summed from the date of retirement through to the maximum age in Australia of 85 years[4]. $P(a)$ is the probability of worker's survival at age a conditional on survival at age a_0[5]. $B(a)$ is the amount of retirement benefit at age a conditional on retirement at age r. The discount rate for this calculation is ρ = 0.03 p.a., a proxy value for the real rate of interest and $a - a_0$ is the discount interval.

$SSW(a_{0,}r)$ is defined in terms of the discounted social security payments ($C(a)$) made by the individual as follows:

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3 SSC(a) is mainly represented by the superannuation contributions which are not available by age, so an alternative approach is adopted. This involves the calculation of the following proportion: Total superannuation contributions in dollars/Total Australian after tax earnings in dollars. Both values are available in Table 1(a), Labour Costs, ABS.6348.0, 2003. The outcome of this calculation is the proportion, 8.78 percent close to the 9 percent compulsory SGL ratio for Australian workers. Superannuation contributions at each age (a) are determined by multiplying the proportion above by average annual after tax earnings at each age (a).

4 The selection of a maximum age of 85 years is based on advice provided by the Australian Bureau of Statistics and is only marginally greater than the weighted average of the male and female life expectancy.

5 P(*a*) is calculated from the Life Tables, ABS 2302.0.55.001, 2002-04.

$$SSC(a_0, r) = \sum_{a-a_0}^{a=r-1} P(a)C(a)\frac{1}{(1+\rho)^{a-a_0}} \quad (3)$$

The accrual of social security wealth is the change in *SSW* between two years and is written:

$$\Delta SSW_{a+1} = SSW_{a+1} - SSW_a \quad (4)$$

The wealth accrual is the change in *SSW* occurring at age *a*+1 minus the value of *SSW* at age *a*. This is a net benefit loss if the accrual is negative and a gain if positive. From this definition of wealth accrual we can calculate the implicit tax rate on working one additional year. This is the accrual divided by the individual's earning[6] in the year of additional work:

$$Tax / Subsidy = -\Delta SSW_{a+1} / Earning(a+1) \quad (5)$$

If this implicit tax on additional earnings is positive, then the extra year's work is deemed to be taxed, and if negative then the individual's additional year of work is subsidized. Our task is to determine if early retirement is subsidized and later retirement is taxed. Note in (5) that a tax applies if ΔSSW_{a+1} is negative and a subsidy applies if this term is positive. Negative values on Table 1 and 2 indicate the rate of subsidy paid and positive values denote the implicit rate of tax on earnings beyond retirement.

The model described by expressions (1) to (5) is calculated, first, for a base case involving a single person household. The result of these calculations is shown on Table 1. A second set of calculations for married couples is also conducted and the result is recorded on Table 2.

The outcome of simulation is a tax/subsidy rate, which indicates the absolute change in

6 The after-tax earnings data (mainly wages and salaries) are drawn from Australian Household Income and Income Distribution, ABS 6523.0, 2003-04. The average income for each age group is used proximately for the average income of each age within the group. The income for the age older than 69 is interpolated based on the knowing age groups.

social security wealth (accrual) as a ratio of the potential earnings from working one more year assuming people retired at age 60 if they are younger than 60 years of age when assessed. This represents the implicit tax on, or subsidy to, continued work in terms of the net change in social security wealth implied by the additional years of work. The numerator of this tax/subsidy rate is the opposite of the change in social security wealth from working the additional year. The denominator is the potential earnings over the additional year. Thus, if the ratio in (5) is positive, the social security system is assumed to cause a disincentive to additional work through foregone social security wealth. This is the relevant concept for the worker who is trading off leisure against continued work.

For the purposes of simulation, we assume that workers claim social security benefits either at the point of their retirement or when they become eligible if they retire before the point of eligibility. To produce the base-case numbers, we use a typical single individual or the couple household head born in January 1943 and who turned sixty in January 2003. In theory, to calculate benefits for a worker, we would need his/her entire earnings history. Because the HILDA survey is conducted from 2001 only, we use social security benefits across all ages in one year (2003) to represent a single person and a couple's entire benefit receiving history. To be consistent, the average earnings and salary across all ages for year 2003 are collected from ABS (2003-04) to represent a single person and a couple's entire earning history.[7]

7 Preferably, we use the median earnings and benefit entitlement of a sixty year old in 2003 (the last available year of data) as our base point and then follow this cohort back through time (using the median benefits for age fifty nine in 2002, age fifty eight in 2001 and so on until age forty in 1983).

The calculations for a couple are more complicated. They include benefits for the surviving spouse, weighted by the survival probability of the spouse. Due to the difficulty of obtaining data on widow's pensions, we simplify the case to assume that a male worker's wife will survive to a given age enabling us to use data from HILDA (2003). A "couple family" here includes all types of couple families with or without dependent or independent children. In practice, we use a static earning history, which is the median earnings of the single person over different ages in one single year 2003.

vii) Incentive Computations

Table 1 shows our single worker results. Each row represents the age of a worker in the last year that he or she worked. Recalling our inability to disaggregate these data by sex, he/she is entitled to social security benefit when he/she reaches the age of sixty. Over age 59, the accrual rate fluctuates between -1 percent and -7 percent. The implicit tax imposed on single workers is quite high as shown on the table. The implicit tax on working beyond age 59 is positive, 40 percent at age 60, rising to a maximum of 101 percent at age 65. Note also that a subsidy applies to workers age 59 years or less, and peaks at this age.

Table 1: Single Person Incentive Calculations

Last Year of Work	Social Security Wealth	Accrual	Accrual Rate	Tax/Subsidy
49	210,127	0	0.00	0.00
50	216,575	6,448	0.03	-0.19
51	226,837	10,262	0.05	-0.31
52	237,494	10,657	0.05	-0.32
53	248,574	11,080	0.05	-0.33
54	260,111	11,536	0.05	-0.35
55	272,143	12,033	0.05	-0.43
56	284,184	12,040	0.04	-0.43
57	296,907	12,723	0.04	-0.45
58	310,268	13,361	0.05	-0.48
59	324,338	14,071	0.05	-0.66
60	315,869	-8,470	-0.03	0.40
61	314,136	-1,733	-0.01	0.08
62	311,905	-2,231	-0.01	0.11
63	291,483	-20,422	-0.07	0.96
64	273,457	-18,026	-0.06	0.85
65	252,033	-21,424	-0.08	1.01
66	235,927	-16,106	-0.06	0.83
67	223,830	-12,097	-0.05	0.63
68	212,678	-11,152	-0.05	0.58
69	198,750	-13,928	-0.07	0.72

Note: Social Security Wealth and Accrual are in Australian Dollars.

Table 2 explores the same issues for a married (male) worker assuming his wife is not entitled to any social security benefit. Thus, above age fifty five, tax rates are generally higher for single than married workers. However in both cases, the pension accrual is typically negative at older ages. Continuation in the labour force means a loss in pension benefits, which imposes an implicit tax on work and provides an incentive to leave the labour force. Again at age 60 the implicit tax on a married worker is 77 percent. This rises rapidly to a maximum of 104 percent at age 66 for married workers and declines past age 66.

Table 2: Couple Family Incentive Calculations

Last Year of Work	Social Security Wealth	Accrual	Accrual Rate	Tax/Subsidy
49	231,012	0	0.00	0.00
50	242,481	11,469	0.05	-0.32
51	253,874	11,393	0.05	-0.32
52	265,706	11,831	0.05	-0.33
53	278,007	12,302	0.05	-0.34
54	290,044	12,037	0.04	-0.33
55	304,177	14,133	0.05	-0.43
56	317,843	13,667	0.04	-0.42
57	332,163	14,319	0.05	-0.44
58	347,197	15,034	0.05	-0.46
59	363,008	15,811	0.05	-0.53
60	339,898	-23,110	-0.06	0.77
61	322,046	-17,852	-0.05	0.60
62	308,123	-13,923	-0.04	0.46
63	294,023	-14,100	-0.05	0.47
64	284,568	-9,455	-0.03	0.32
65	271,452	-13,116	-0.05	0.44
66	244,080	-27,372	-0.10	1.04
67	226,491	-17,589	-0.07	0.67
68	207,898	-18,592	-0.08	0.70
69	194,770	-13,128	-0.06	0.50

Note: Social Security Wealth and Accrual are in Australian Dollars.

How does Australia stand in an international comparison of the implicit tax rate on work at age 60? The answer to this question is provided in a comparison of the implicit tax rates on further work at age 60 with implicit tax rates elsewhere. In Australia, the implicit tax rate at age 60 is 40 percent for single persons and 77 percent for couple families. By way of contrast, Gruber and Wise (1999) find the implicit tax on earnings from one extra year's work to be 82 percent (Belgium), 80 percent (France), 141 percent (Netherlands), 75 percent (UK), 35 percent (Germany), -23 percent (Spain), 8 percent (Canada), -1 percent (United States), 28 percent (Sweden) and 47 percent (Japan). The average implicit tax on one year's additional work in these cases is 47.2 percent, so Australia's 40 percent for single workers is slightly

below this average. This comparison ignores all changes in retirement tax policy in these 11 countries since 1999.

3. Conclusion and Policy Implications

The major finding of this study is that biases in the Australian taxation system favour early retirement. The implicit tax on continuing work is negative for the age groups 49 to 59 suggesting that early retirement is encouraged by the current taxation system. The same outcome applies to married workers where the implicit tax on further work is negative. The only discernible difference between single and married workers is that a higher subsidy is paid to single workers. The average subsidy to single workers (12 percent p.a.) is smaller than the average subsidy paid to married workers (11 percent p.a.). However above age 59 both single and married workers are taxed on work performed for each year beyond the retirement age. Thus the Australian taxation system as it existed prior to May 2006 was biased against continuing to work beyond age 59.

This bias is explained in part by legal structures in some cases and by the ideological climate prevailing in the labour market in the 1990s. A good example of legal effects is the so called 54/11 'problem' applying to Australian federal public servants. Laws pertaining to retirement and the particular public service pension scheme mean that retirement benefits are maximised at 54 years and 11 months and the costs to individual workers retiring beyond that age are penal in nature. Other examples will surely be found. In relation to the 1990s, this was an era in which downsizing and early retirement were almost a *cause celebre* and in some respects engendered by an IT revolution in which there was a mismatch between a

previous skills generation and the job requirements of the IT age. Many mismatched workers took voluntary redundancies or were involuntarily retired by employees in a downsizing process commensurate with the needs of a new IT technological epoch in work patterns.

The policy paradigm has shifted again as skill shortages have become evident in many sectors of the Australian economy and encouragement for skilled workers to stay at work at older ages is becoming an imperative. One way of achieving this outcome is to reduce the tax burden on retirement benefits, as signalled by the Australian government in the 2006-07 federal budget. Lump sum and pension payments will no longer be taxed at the point of exit. This applies to all taxed superannuation benefits regardless of the age at which retirement occurs. The precise effect of this tax exemption cannot be determined until after the new system is implemented on 1st July 2007. The likely effect is that all of the implicit tax rates shown on Tables 1 and 2 will fall and it is conceivable that some of the positive implicit tax rates at and beyond age 60 will become negative, although this is not guaranteed. However, this tax exemption will apply to all superannuation payouts, particularly those occurring at ages 55 to 59; thus the effect in these cases will be to make the implicit tax on retirement at these ages even more negative. The removal of the 15 percent tax on all but untaxed funds may not disturb the balance between early retirement and continued work. If the government wishes to address this imbalance it would need to have an age barrier to the tax exempt status. For example, only those aged 60 and above upon retirement might be fully exempt from the exit tax on their funds.

The removal of the Reasonable Benefits Limits (RBL) announced in the 2006-07 budget will affect the retirement decisions of wealthier employees; those entitled to lump sums

exceeding $600,000 in value or a stream of pension entitlements exceeding 1.1 million dollars. The excess (above RBL) entitlements have previously been taxed at the normal marginal rate (48 percent). Now wealthier retirees can access their funds at a nil exit rate regardless of the size of their benefit. Further research is called for on these issues, although this extended research agenda must await the 12 month consultation period which applies prior to the policy implementation date of 1st July 2007. There are several additional changes to superannuation concession; limits and entitlements to be finalised following consultations with the superannuation industry.

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