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Great (Retirement) Expectations: A Review of Retirement Income Policy and Changes to Expected and Preferred Retirement Age of Australian Workers

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ABSTRACT

Research Question/Issue: Retirement age expectations and preferences are shaped by individual, social, and government policy influences. Our paper reviews major policy changes in the Australian Retirement Income System over the past two decades and documents changes in Australian workers' expected and preferred retirement age.

Research Findings/Insights: We identify three key results. First, workers prefer to retire earlier than they expect to, on average. Second, both expected and preferred retirement age increased through the 2000s and 2010s but stalled from 2017. Third, a significant proportion of workers do not know when they expect to retire.

Practitioner/Policy Implications: In the absence of the ability to set a mandatory retirement age, a key objective of retirement policy has been to raise retirement age. Our results suggest that while workers' expectations and preferences reflect this, they have stalled somewhat. Further, a small but persistent proportion of workers do not form expectations which, given its importance in successful workforce exit plans and retirement wellbeing, presents a key challenge.

Methods Used: We describe changes in policy over the past two decades before describing patterns and dynamics in retirement age expectations and preferences of workers aged 45–60, 2003–2023 using the Household, Income and Labour Dynamics in Australia (HILDA) Survey.

1 | Introduction

Like many developed countries, Australia faces significant fiscal pressures associated with an ageing population with increased life expectancy. Notwithstanding Australia's mandatory superannuation scheme successfully constraining the share of government expenditure on pensions (Commonwealth of Australia 2020), the broader consequences (e.g., from health expenditure and a greater dependency ratio) means age-related government expenditure is forecast to account for 40% of the increase in Australian Government expenditure over the next four decades (Commonwealth of

Australia 2023). A key factor in the sustainability of government expenditures is the choice of retirement age of workers, and this has been a focus of policy initiatives over the past two decades. However, as this is not mandated or otherwise exogenously determined (Zhu 2021), policy has focussed on superannuation (e.g., 'Simpler Super' [2006], 'Better Super' [2007]), Age Pension (AP) (e.g., 'Secure and Sustainable Pension Reform Package' [2009]), and employment (e.g., 'Restart' [2014], 'More Choices for a Longer Life' [2019], 'Working Future' [2023]) to change retirement age expectations and preferences.

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Policy success relies on both successful design and implementation as well as, crucially, individuals' capacity and willingness to respond to these policies when planning for their retirement. A combination of large and incremental changes to AP eligibility and superannuation contributions and access rules has combined to affect retirement savings, retirement income and workforce participation, making planning complex and challenging both for policy makers and individuals.

Individuals may fail to respond to policy changes if they perceive they are disadvantaged by the system (Settle 2023), negatively impacted by specific reforms (Morris 2022b), or lack interest or trust (Deetlefs et al. 2019). Even if accepted as well-intentioned and evidence-based (for dissenting views on superannuation and pension policies, see, e.g., J. R. Evans and Razeed 2021; Ganegoda and Evans 2017), policy effectiveness still requires workers' understanding and engagement. Engagement requires capacity to respond to information, recognise incentives, form intentions, and enact behaviours. While not mutually exclusive, retirement policy choice architecture (Thaler and Sunstein 2008) vary in emphasis from behavioural (e.g., use of 'nudges' via defaults) to rational agent model (e.g., role of disclosure and financial literacy) approaches.

In terms of superannuation policy, a shift towards a more behavioural approach was articulated in the Super System Review of 2010 (Commonwealth of Australia 2010). The review challenged the 'rational and informed investors' assumption, a 'key tenet' of the Financial System Inquiry, and instead argued to cater to those not engaged, without capacity or interest. While the effectiveness of choice architecture interventions, particularly defaults, is supported in meta-analyses (Mertens et al. 2022), the weakest intervention effects are found in the finance domain.¹ Recent meta-analyses of financial literacy interventions (Kaiser et al. 2022) report comparable standardised effect sizes (0.20) (Cohen 1988) to those in finance reported by Mertens et al. (2022) but only in the financial knowledge domain, with smaller effects reported for financial behaviour (e.g., 0.10 for saving). In the case of retirement phase policies, however, there are no defaults given the absence of a mandatory retirement age and the need for active choices including when to switch from accumulation to pension phase, the withdrawal rate, and the investment strategy in pension phase,² all of which place significant cognitive demands on individuals.

Many international studies identify a positive association between financial literacy/knowledge (objective and perceived) and retirement planning (Anderson et al. 2017; Hershey and Mowen 2000; van Rooij et al. 2012). Most of these studies use a single indicator of retirement planning similar to the question used by Lusardi and Mitchell (2006): 'Have you ever tried to figure out how much your household would need to save for retirement?'. Broader scales of 'Financial preparedness for retirement' (Hershey and Mowen 2000), retirement planning (Petkoska and Earl 2009) and the 'Process of retirement planning scale' (Noone et al. 2010) also include questions about retirement living costs and having sufficient income for retirement, but do not ask a specific retirement age or length question. It is implicit that a retirement income/savings calculation includes an expected retirement age (ERA) and length of retirement input. However, a retirement age expectation can be

formed independent of a calculation or subsequent savings behaviours. Hence it is not clear what association should be expected between financial literacy and expected or preferred retirement ages (PRAs), given prior retirement planning evidence. Related to estimations, Zhang et al. (2024) find that financial literacy is negatively associated with responding 'Never' to an ERA question.

Our interest is to: (1) review the substantive policy changes relevant to retirement age expectations and preferences over the past two decades; and (2) evaluate aggregate Australian workers' expectations and preferences over retirement age between 2003 and 2023. Drawing on data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey, we primarily focus on cross-sections of workers aged 45–56 years, and within-person changes over 4-year periods. The following section provides an overview of the relevant policy landscape, and key changes and events having occurred during the period of interest. The discussion is not intended to be an exhaustive review of all policies or of individual policies, rather to highlight the more significant events expected to impact retirement age expectations and preferences. Section 3 provides evidence on ERA and PRA. The final section provides discussion and suggestions of further work.

2 | Key Policy Influences on Retirement Age (2003–2023)

The Australian Retirement Income System comprises three pillars: the AP, a non-contributory publicly funded safety-net; the compulsory superannuation system; and voluntary private saving which includes voluntary superannuation. The increased focus on pillars 2 and 3 for building financial assets to reduce reliance on pillar 1, supplemented policies that supported home ownership (Yates and Bradbury 2010) such that housing is argued as a fourth pillar, albeit with an evolving role given changes in housing affordability (Chen et al. 2024). The most direct policy levers for impacting retirement age remain the AP eligibility age and the superannuation preservation age (the age at which individuals may access their superannuation savings). Changes to the AP payment rate and means tests are expected to indirectly impact retirement age, as are policies changing superannuation contributions rates and balances.

2.1 | AP Eligibility Age

In the absence of an ability to mandate a retirement age,³ the legislated AP eligibility age is one of the most explicit retirement age-focused government policies. These statutory ages act as significant anchoring-points (Wu et al. 2016), influencing retirement incentives (Zhu 2021) and retirement age expectations (Coppola and Wilke 2014). The eligibility age for the AP remained 65 for Australian males and 60 for females for most of the 20th century since its first payment in 1909. After a 1994 reform, the eligibility age for females has ranged from 60 to 65 years, depending on the date of birth.⁴ There is mixed evidence on this reform's overall impact. Early evidence suggested this policy had a significant and positive impact on retirement age (Atalay and Barrett 2015; Zhu 2021). Atalay and Barrett (2015) suggest that each 6-month delay in eligibility is

equivalent to a 2.5% drop in expected social security wealth expected to increase ERA for females.⁵ Atalay and Barrett (2015) find that a 1-year increase in eligibility age results in a 12 percentage points (pp) decline in retirement for women, higher (19 pp) conditional on meeting the means test. However, more recent studies argue the effect of the policy is more modest (Hiev 2024; Kabátek et al. 2025) while Morris (2022a) argues that once the longer-term positive labour force participation trend among females is accounted for there is no significant policy impact on labour force participation. Policy reform in 2009 increased AP eligibility age from 65 to 67 for males and females on a staggered basis. For those born from 1 July 1952 eligibility age increased by 0.5 years for 18-month birth cohorts⁶ impacting most workers of interest in Section 3. For example, while in 2008 all respondents aged 45–56 had a 65 eligibility age, by 2009 9% had an eligibility age of 65.5 (those aged 55–56), 11% 66, 12% 66.5, and for the remaining 68%, 67.

2.2 | AP Rate and Means Test

The AP serves as an income safety net and supplement. In isolation, AP rate increases can encourage a lower ERA, as it can replace income that would otherwise have to be generated from savings. However, AP increases over the past two decades, beyond automatic indexation, have been framed as compensation for cost-of-living increases or to help ‘keep up with community living standards’ (Commonwealth of Australia 2009b, 7). In 2003, the maximum AP basic rate for singles was 25% of Total Average Weekly Earnings (MTAWE), indexed to the Consumer Price Index.⁷ The most significant change since, following recommendations of the Harmer Pension Review (Commonwealth of Australia 2009a), increased the AP benchmark to 27.7% of MTAWE for singles, with the couple’s combined set at 41.76%, in March 2010.⁸ This was the largest change in the AP rate in over 30 years (Australian Council of Social Service 2009), more so for singles.⁹

The AP is means tested, with the benefit reduced once assets (income) exceed a threshold.¹⁰ The means test has been applied since inception to the AP, at different times, to ensure provision on the basis of ‘need’ (for a review see Nielson 2010). The threshold over which payments reduce, and the rate of reduction, can be changed by government as ad hoc policy initiatives, in addition to the automatic indexation of thresholds.¹¹ Over the review period, opposite policy changes were made to the tests a decade apart. In 2006, as part of the ‘Simpler Super’ policy, the assets taper rate (reduction for assets above the threshold) was reduced from \$3.00 per \$1000 above the threshold to \$1.50 per \$1000 as the higher rate was seen to act ‘as a large disincentive to save for retirement’ (Australian Government 2006, 11). The change provided more income with a given level of savings and could be expected to enable an earlier ERA. In 2015 it was announced that the assets taper rate was to revert to \$3.00 per \$1000 from 2017, but at the same time the thresholds were lifted substantially (between 20% and 26%) to make it ‘fairer and better targeted ... [to] help ensure the pension system is sustainable into the future’ (Commonwealth of Australia 2015, 3). While the magnitude and sustainability of the changes were contested (for a discussion see Klapdor 2015), the unambiguous ‘winners’ and ‘losers’ were those with assets under and above the new threshold, respectively.

2.3 | Superannuation Preservation Age

Superannuation is the primary tax-advantaged retirement savings product for Australian workers, primarily received due to compulsory employer contributions, legislated via the Superannuation Guarantee (Administration) Act in 1992. Superannuation did not have a legislated objective until 2024, and was then given the specific aim ‘to preserve savings to deliver income for a dignified retirement, alongside government support, in an equitable and sustainable way’ (emphasis added).¹² In exchange for tax concessions, retirement savings are preserved until a condition of release is satisfied. For most workers this will be retirement having reached ‘preservation age’.¹³ The preservation rules applicable over the period of analysis were announced in 1997 and became effective from July 1999.¹⁴ The 1999 reforms retained preservation age at 55 years for those born before 1 July 1960, but increased it by 1-year for those born in each subsequent financial year, to a maximum preservation age of 60 for those born from 1 July 1964.¹⁵ The stated objective for this change was to reduce the gap between the AP eligibility age and the preservation age (Costello 1997), with the implicit expectation of increasing retirement age.

A substantive policy change legislated¹⁶ in 2005 (proposed 2004) introduced a ‘transition to retirement’ (TTR) provision which allowed workers to access retirement savings if they had reached preservation age but had not yet retired, the additional condition of superannuation release. This provided the opportunity for workers to reduce work hours and replace forgone income with superannuation. An incentive of a TTR was that not only would superannuation withdrawals be tax-free (from aged 60), but so also were the earnings in the superannuation account. The expected benefit was greater workforce participation at older ages, or equivalently, higher expected age of being retired completely.¹⁷ However, a decade on it appeared neither happened (Australian Law Reform Commission 2013), and TTRs were ‘used almost exclusively by people working full-time and as a means to reduce tax liabilities among wealthier Australians’ (Productivity Commission 2015, 20). In 2017 rules changed such that while income withdrawn remained tax-free, earnings no longer were. This, combined with contribution changes (see next section), reduced TTR attractiveness.

2.4 | Superannuation Concessions and Incentives

Over the past two decades a variety of ad hoc policy changes were made to superannuation, all potentially impacting retirement age expectations and preferences. The compulsory Superannuation Guarantee (SG) contributions rate employees receive from employers was largely comparable over the whole period, changing from 9.0% in 2003, 9.25% in 2013, 9.5% in 2014 until 2021 when it increased to 10%, and 11% in 2023.¹⁸ While superannuation savings crowd out some other household savings, evidence suggests the substitution is less than half (Connolly 2007; Ruthbah 2022) such that compulsory superannuation has been associated with increased household wealth. Hence, it could be expected that increases in the SG rate might be associated with a decrease in ERA as savings accumulate quicker, absent changes in retirement income expectations.

Rules on the limits on how much could be contributed to superannuation changed significantly over the period. As with the noted AP eligibility changes, other reforms were announced in May 2006. First, concessional contribution limits were streamlined with the effect of increasing the opportunity for younger workers (below age 50) to increase concessional savings, whereas for those 50 years and older the amount was much the same.¹⁹ A non-concessional cap was also introduced of \$150,000 per annum. This, coupled with the cap of total superannuation accumulation being removed, improved the ability of workers to save in a tax-advantaged way.²⁰

The impact of these changes was eclipsed by the elimination of tax on superannuation withdrawn from age 60, announced in May 2006.²¹ For an average worker, this was estimated to provide a benefit of \$37,000 (Australian Parliament 2006, 10). Such changes effectively made balances larger, which could result in larger amounts accumulated for a given ERA, or lower the ERA to accumulate a savings goal. Analysis of these effects is complicated by workers' existing balances; particularly older workers, having been exposed to a mixture of tax treatments depending on the contributions and their timing.²² It is difficult to isolate the impact of the various changes to superannuation concessions and access that occurred between 2004 and 2007. No impacts were found post-2007 in aggregate labour participation or supply, or on ERAs (Headey 2011, 79). In addition to complexity, the number and frequency of changes may have hampered a desired policy response through diminished trust in policy permanency, being perceived as 'here today but revised tomorrow' (Headey 2011, 79).

Concessional caps were subsequently adjusted on an ad hoc basis, without a clear rationale. First, reducing to \$50,000 in 2009/2010 for those aged 50 and above, and \$25,000 for those under 50; until 2012/2013, when the cap became \$25,000 for all ages. This was changed again in 2013/2014, retaining a higher amount for older workers (59 years plus of \$35,000 vs. \$25,000); and in 2014/2015 (49 years plus of \$35,000 vs. \$30,000). From 2017/2018 the cap became \$25,000 for all ages. While caps changed often, the proportion of workers estimated to be impacted was small. For example, the change to the concessional cap to \$25,000 impacted 3.5% of workers (Australian Treasury 2017) and there remained significant non-concessional opportunities to save. Predicting the net impact of these reforms is challenging, in part because people might 'adjust only slowly to the new retirement savings world they find themselves in' (Crawford et al. 2020, 38). One study to do so in an Australian context is Chan et al. (2022) who find, for high income earners, a significant response in contributions following concessional cap changes. Importantly, they also find that, in addition to concessions increasing contributions, the changes also have a positive effect on taxable income via increase labour supply due to a lower effective tax rate. The latter is significant, as it contributes to the cost-effectiveness of the concessions.

Other incentives include the superannuation co-contributions policy, introduced in 2003, to make non-concessional contributions more attractive for lower income earners. Initially (2003/2004), the government matched 100% of a worker's non-concessional contributions to a maximum of \$1000 for those with incomes up to \$27,500, before tapering to a higher income threshold.²³ Despite the incentives, including matching rates

increasing to 150% in some years, the effectiveness of policy has been limited (Chan et al. 2020; Sobeck and Breunig 2020). Other policies have sought to negate the disincentives of superannuation for low-income earners. In 2012 the Low Income Superannuation Contribution (LISC)²⁴ was introduced as a means of refunding the tax paid by low-income earners who otherwise would pay more tax on their contributions than had they received income. LISC was amended and rebadged as Low Income Superannuation Tax Offset (LISTO) in 2017.²⁵

In sum, significant reforms at the start of the period of review significantly increased incentives to save for retirement via superannuation for workers.²⁶ Subsequent reforms have maintained the ability of workers to save in a tax-advantaged way for retirement. Some changes reduced the tax efficiency of superannuation savings or capped how much could be saved. However, at the same time, other policy changes increased efficiency of superannuation savings. While the reduction in contribution caps may reduce the ability to save via superannuation, opportunities for other tax-advantaged savings remain. Additionally, even given the reduced levels in 2017/2018, the majority of workers, on average, remained below the cap, including high-income earners (The Treasury, 2020, 238).

A final caveat to an anticipated response to policy affecting superannuation balances is the interaction between superannuation and AP eligibility. As noted, the AP is means-tested, and larger superannuation balances can reduce AP eligibility and rate. Further, these reductions can be significant over a wide range of asset values (Asher and De Ravin 2018; Hammond and O'Brien 2017). Thus, while in isolation larger balances can be expected to support a required retirement income earlier (i.e., earlier ERA), policy reforms such as those introduced in 2017 result in a 'pension welfare environment that provides a very powerful disincentive to save' (Asher and De Ravin 2018, 19).

2.5 | Labour Force Participation Policies

The initial Intergenerational Report in 2002 was pessimistic about targeting older workers to improve labour force participation or the potential growth in older workers' participation rates given they 'would have only a limited impact on the overall participation rate' (Commonwealth of Australia 2002, 28). However, both have been revised upward in subsequent reports (McDonald 2023). Compared to other age groups, older Australians—and particularly women—have experienced the largest increases in participation rates (Commonwealth of Australia 2023). The previous sections have focussed on policies with primarily financial incentives (disincentives) for workers to continue (stop) working. These policies may have 'largely exhausted' the economic dividend possible from them (Gahan et al. 2017, 516) with a need for the next phase of policy and reform to focus on 'micro-level issues'; including motivations of older Australians and employer practices (Gahan et al. 2017), as well as policies to overcome barriers in older workers' skills and experience, health, disability and age discrimination (CEPAR 2021). Reviews have reinforced the need for coordinated policies (e.g., Australian Law Reform Commission 2013). However, beyond committing to recommendations of the 2012 Advisory Panel on the Economic Potential of Senior Australians, over the past 20 years, 'government

commitment to strategies that encourage employment has waxed and waned' (Caines et al. 2020, 428).

The federal government's 2014 'Restart' program provided subsidies to employers (rather than workers) for employing older (50 plus) workers. The effectiveness of the programme was criticised given that in its first year less than 2000 of a projected 35,000 made use of it (Gahan et al. 2017). Notwithstanding adjustments, remaining criticisms highlighted lack of awareness and potentially the stigma created by a subsidy for older workers (Australian Human Rights Commission 2016). Other than the noted changes to pension eligibility age, until 2018 the federal government's 'interest in older workers appeared to decline' (Caines et al. 2020, 428).

In the 2018 federal budget, 'Restart' was expanded via the 'More Choices for a Longer Life Package', in addition to a 'Skills Checkpoint for Older Workers Programme' which provided older workers (45–70) with career advice, education and training. This was supported by funding from 'The Skills and Training Incentive'. Other programmes included the 'Job Change' and 'Career Transition Assistance Program' which focussed on developing skills for new careers at older ages to support prolonged workforce participation. Evaluations of these programmes were generally positive, notwithstanding counteracting effects of other policies introduced in response to the COVID-19 pandemic (Department of Employment and Workplace Relations 2022a, 2022b)—specifically the 'Jobmaker' policy, which discriminated against older workers as wage subsidies were targeted to those under 35 years of age (Downes et al. 2021).

2.6 | External Environment Role in Policy Impact

The various policy changes described here interact in complex ways and are sometimes conflicting. In addition, unanticipated events can both enhance and foil intended policy impacts. For example, the superannuation policy reforms in 2007 and the AP changes in 2009 overlap with the global financial crisis (GFC), which resulted in a loss of over \$200 billion of superannuation assets, with assets only returning to pre-GFC levels in 2010 (Australian Prudential Regulation Authority 2019). An example of how policy and external events interact is the 50% increase in AP applications in December 2008 (relative to 2 months prior) due to the significant superannuation balance drops (Gerrans 2012). The drop in balances resulted in an increase in expected AP eligibility and entitlement rate, though the latter was smaller than it could have been as a result of the 2007 drop in the means-test taper rate.²⁷ Further, impacts of external conditions are heterogeneous. For example, older males' labour force entry and exit appears more sensitive to economic conditions (R. Evans et al. 2018). As noted earlier, the COVID-19 pandemic interrupted policies focused on prolonging labour participation. In addition, workers' superannuation balances declined in the initial financial market volatility that accompanied the pandemic's onset and the 'COVID-19 Economic Response—Early access to superannuation' ad hoc government emergency policy response, which resulted in the withdrawal of \$38 billion from superannuation savings between 2020 and 2021. For comparison, over the same period \$23 billion was withdrawn by those having satisfied a retirement condition of release (Australian Prudential Regulation Authority 2025).

2.7 | Policy and Preferences

The success of the various policies discussed above relies on their effect on shaping retirement age expectations and preferences—the former arguably easier than the latter. That is, to the extent policy has sought to extend working lives and increase retirement age, revisions to AP eligibility age and preservation age set clear expectations of when access to sources of income replacement is available. The necessary acceptance by workers (voters) is helped by preferences moving in the same direction as expectations. This is challenging, and the long lead times for policies reflect this. For example, the change to align females' eligibility age with that of males was announced in 1993, legislated in 1994, started to change in 1995, but was not completed until 2014.

Some policies appear to have failed, given the distance between proposed new expectations and prevailing preferences. For example, the 2014 government proposal (Australian Parliament 2014) to increase eligibility age to 70 was never proposed in legislation, and was abandoned in 2018 (Hutchens 2018) as it was considered ahead of its time (Chomik 2018). Outside Australia, similar examples include Canada's reversal of a pension eligibility age increase, on the basis of having been a 'simplistic solution' (BBC News 2016). Relatively more modest changes in France in 2023 increasing eligibility age from 62 to 64, while ultimately legislated, were fiercely opposed, and proposals to reverse the legislation persist (Editorial 2025). Hence, while we expect workers' ERA and PRA to correlate with policy changes, we expect the preferred age to be 'stickier' reflecting that workers' preferences are harder to change.

3 | Evidence on ERA and PRA

Having reviewed key changes in the relevant policy landscape, we now move to an analysis of Australian workers' ERA and PRA across the 20-year period between 2003 and 2023. These data are drawn from the HILDA Survey, which is administered to a nationally representative sample, and include a diverse range of economic, employment and family life questions.²⁸ Respondents aged 45 years plus and who are not 'completely' retired are asked questions about retirement age.²⁹ We exclude those with a 'Refused' response as they constitute 0.01% of the respondents. ERA is captured by responses to the question, 'At what age do you expect to retire (completely) from the paid workforce?', which is asked annually; while PRA is captured by responses to the question 'If you had the choice, at what age would you like to retire (or completely retire if currently partially retired) from the paid workforce?' is only asked quadrennially. Given the two initial waves (2001, 2002) used different question wording, and two waves (2004, 2005) used a restricted sample,³⁰ we use ERA responses from waves 2003 and 2006–2023, and PRA from 2003, 2007, 2011, 2015, 2019, and 2023.

The retirement age questions allow non-numeric responses including *Never* and *Don't Know*. As much as interest is in the specific age of retirement, the non-numeric responses are a 'substantive category' of interest (Zwier et al. 2021, 287) and previous analysis of the data argues 'the complexity' of responses in the HILDA data can be interpreted usefully (COBB-CLARK and Stillman 2009, 147). The following

summary analysis therefore includes these non-numeric responses, as well as specific age responses. We are cognisant of a selection bias stemming from missing information from those already retired. To minimise this bias, COBB-CLARK and Stillman (2009) focus on those aged 45–55 years. While we also seek to minimise this bias, and focus on three 4-year age groups covering ages 45–56 (45–48, 49–52 and 53–56), we also include the 57–60 age group in order to evaluate within-person changes in responses of those aged 45–56 years over 4 years, that is, up to age 60 years.

When considering differences in ERA and PRA across age, generation and time, it is important to highlight how the composition of a constructed group changes. For example, the composition of an age group (e.g., 45–48-year-olds) varies by the year observed as this determines the range of dates of birth matching the age group. Similarly, the composition of a generational group (e.g., Gen-X) will vary by age range depending on the year it is observed. Our sample includes Baby Boomers ('older' Boomers born between 1946 and 1954 and 'younger' Boomers born between 1955 and 1964) and Gen-X (born between 1965 and 1974). In 2003, some of those in the 57–60 age group are Silent Generation members, but because this is the only year in the sample period they appear we exclude them in the interest of sample consistency. Those in the youngest age group (45–48) were all younger and older Boomers between 2003 and 2009, a mixture of Boomers and Gen-X between 2010 and 2013, and all Gen-X from 2014. Hence, we do not observe 50-year-old Baby Boomers at the same time as 50-year-old Gen-X's or see the same response changes over the same period and age group for different generations.

The expected impact of the significant policy reforms described in Section 2 on respondents in the sample will depend on the compositional changes noted above and timing of announcement. For example, all but a few aged 45–48, when observed in 2011, had a preservation age of 60 due to the 1999 policy change, and all had the higher AP eligibility age of 67 due to the 2009 change. Similarly, while the sample of 45–48 year olds is homogeneous in terms of preservation and AP eligibility age in 2011, the generation composition is mixed, being approximately a 60%/40% split between younger Boomers and Gen-X, but becomes homogeneous in terms of all three characteristics by 2015. Similarly, for the 49–52 age group, since 2015 mean AP eligibility and preservation ages have been constant, but the generation composition changes from 40/60 Gen-X/younger Boomers to all Gen-X in 2019. From 2019 AP eligibility and preservation ages have been constant for the 53–56 age group, but by 2023 the generation composition changed from 40/60 Gen-X/younger Boomers to all younger Boomers. Finally, for the 57–60 age group, composition was uniform earlier (2003 to 2011) with the same preservation (55) and comparable AP eligibility ages (63 to 65). In summary, isolating the role of one factor is not generally possible, but selected combinations can improve sample homogeneity to allow comparisons.

3.1 | Levels and Overall Change in ERA and PRA

3.1.1 | ERA

Figure 1 presents a summary of ERA responses including the mean of those with a numeric response, the proportion

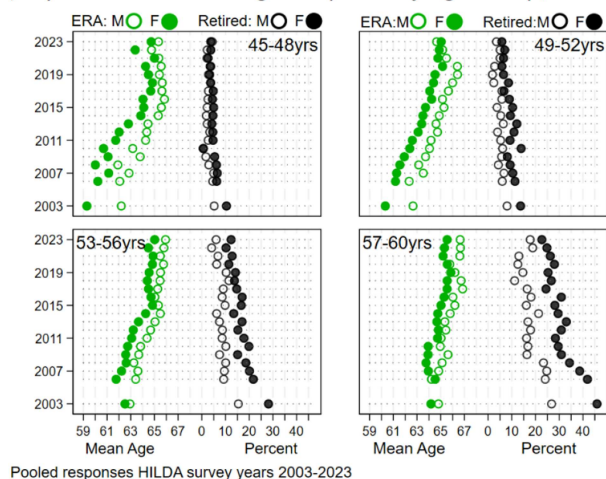
Completely Retired, and the proportions of *Never* and *Don't Know*. As expected, Panel a indicates that the proportion retired is smallest (largest) in the youngest (oldest) age group. In the two oldest age groups the proportion retired has decreased across waves suggesting an increasing trend in retirement age. For example, in the 57–60 age group, one in three were retired in 2003, and by 2023 it was closer to one in six. Generational composition of age groups change over time. In 2003 those aged 57–60 were mainly older Boomers whereas in 2023 the same age group were 60/40 younger Boomers/Gen-X. Panel c indicates that approximately 23% of younger Boomers were retired in 2023 when the mean age of the sample was 59. When the mean sample age of older Boomers was the same in 2014, 32% had retired. Note that in our analysis whereas the composition of age groups differ over time, given they are different age-group samples, within generations a selection effect is also evident. That is, a generation necessarily ages over time as it is defined by birth years, and given that the non-retired sub-sample reduces as more of the generation retire. This is more so when tracking older Baby Boomers, as in 2003 all are in-scope, being older than 45, and no new respondents join the generation sample. For younger Baby Boomers, those with later birth years enter the sample until 2009 when all are at least 45. Hence, within generation, ERA and PRA are expected to be changing due to this selection effect which ages the sample.

Figure 1a also shows that while mean ERA generally increased over time across each age group, the trend stagnated at different times, or reversed. For example, mean ERA increased up to 2015 for 53–56 year olds, 2017 for 57–60 year olds, 2018 for 45–48 year olds and 2020 for 49–52 year olds. For younger Boomers, the increasing ERA trend has continued as the cohort aged after stagnating between 2017 and 2020. The Gen-X group shows no clear trend since 2017. While the mean age of Gen-X's in the sample increased 3 years between 2017 and 2023, mean ERA remained unchanged. For young Boomers, mean ERA increased 2 years over the same period as the mean sample age increased 3 years (to 59).

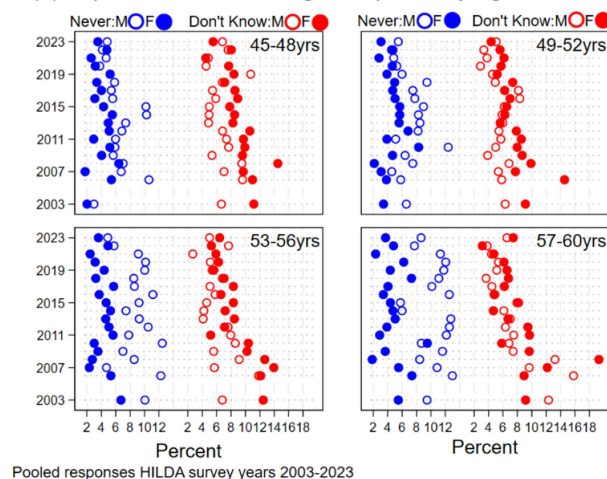
Several gender differences emerge. First, the proportion retired is higher for females; more so in older age groups (Panel a) and for Boomers (Panel c). Within age groups, the gender gap in those retired reduced over time. In the oldest age group, where the gap is widest, the gap reduced from 23 pp to 5 by 2023. For Gen-X the proportion retired is much smaller given the average age of the sample is 51 in 2023, and the gender gap is small in absolute terms. For older Boomers, the gap is largely constant between 2003 and 2013 (11–14 pp) before dropping in 2014 and 2015, though the sample is smaller. For younger Boomers the gap is wider from 2015 (10 pp) than to 2014 (6 pp). More men answer they never expect to retire (more so older men and younger Boomers) whereas more women answer they do not know, between 1 and 3 pp.

In terms of mean ERA, trends are similar by gender. Males consistently report higher ERAs, overall averaging 1.2 years higher. Mean ERA is higher for females in only 2 of the 76 combinations of age group and year. Note that preservation age cannot account for this difference as it is based solely on date of birth. Differences in eligibility age are also not relevant. While eligibility age was gender-based, policy reforms in 1993 facilitated harmonisation of eligibility age by 2014.³¹ In our sample, this has a minimal impact for the oldest age group in

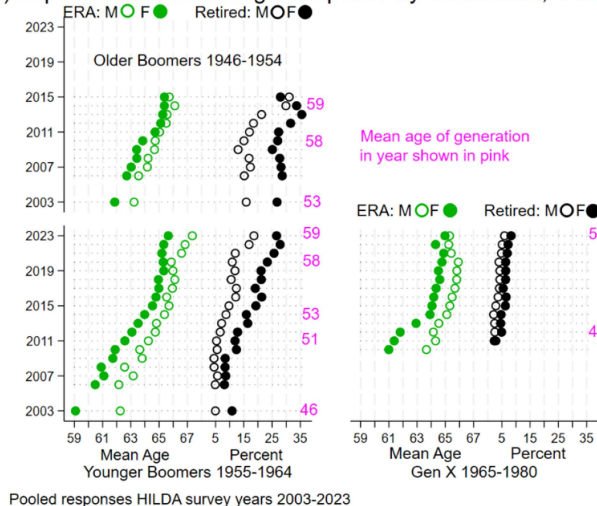
(a) Expected Retirement Age Response by Age Group, Gender



(b) Expected Retirement Age Response by Age, Gender



(c) Expected Retirement Age Response by Generation, Gender



(d) Expected Retirement Age Response by Generation, Gender

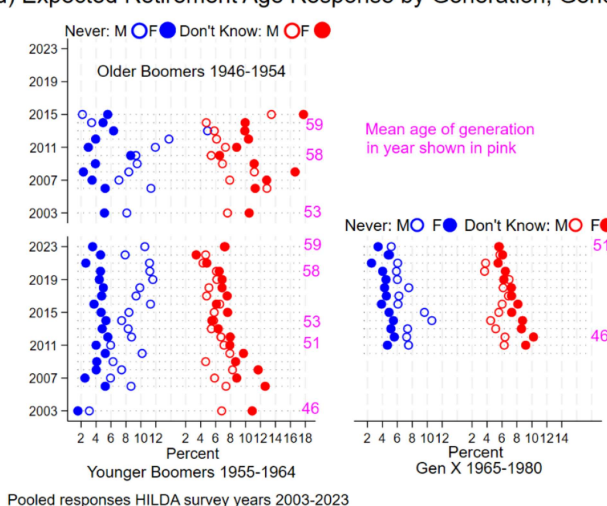


FIGURE 1 | Expected retirement age (ERA) by age group and generation. This figure summarises ERA responses by age group (panel (a) and (b)) and generation (panel (c) and (d)). Panel (a) and (c) present mean ERA, for those with a numeric response, and the proportion retired. Panel (b) and (d) show the proportion responding with 'Never' and 'Don't Know'. Panel (c) and (d) also show the mean age of the generation sample for the year.

2003–2007, where the eligibility age of females was 0.4 to 1.5 years younger. The gap for this age group persists once eligibility ages became the same.

In terms of the AP eligibility age changes in 2009, mean ERA increased 1.5 years for those 45–48 and 0.5 years for those 49–52 between 2008 and 2009. For the oldest age group who were unaffected, mean ERA increased 0.3 years. Note that between 2008 and 2009 superannuation balances of most workers were improving post-GFC, which would be expected to support earlier ERA. For example, for those responding in late September to November 2009, the All Ordinaries Index was higher compared with 12 months earlier, though it was still close to 30% lower than the market peak in 2007.

While AP eligibility changes primarily impacted those in the two youngest age groups in 2009, as these respondents age, they are observed in the two highest age groups in 2011 and 2015 onwards. Hence the 2-year increase in mean ERA between 2007 and 2015 for the 53–56 age group may be explained by the mean AP eligibility age of the age group being 2 years higher in 2015. For the 57–60 age group, the relevant comparison is between 2011 and

2019, where the mean ERA increased 1.1 years while the mean eligibility increased 1.5 years. These comparisons suggest the changes to AP eligibility age did have an impact on ERA. A competing generational composition explanation (panel c) is also plausible—at least for the two older age groups—as younger Boomers replace older Boomers in the two age groups over these time periods, and younger Boomers have higher mean ERA when both generations are observed at the same age. For example, when the mean age of both were 58 years, younger Boomers' mean ERA was 1.4 years higher (66.1 vs. 64.7 years). Of course, these generations are only observed with comparable mean ages at different time periods (2009 vs. 2018).

While changes to preservation age preceded the sample period, it has an impact given the composition of age groups change over time, and younger individuals who have higher preservation ages (i.e., born after 1 July 1960) move in and out of age groups. For example, all in the 45–48 age group in 2003 observed a preservation age of 55. In the same age group, between 2007 and 2011, the mean preservation age increased 3 years from 56 to 59, and then increased to 60 by 2015, as those

born after 1 July 1960 enter the age-group sample. Just as the AP eligibility age ‘rippled’ through age groups, so does the 1999 change for each subsequent older age group. For example, for the 49–52 age group mean preservation age increases 3 years between 2011 and 2015 before hitting 60 in 2019.

The pattern in mean ERA among the 53–56 age group in the sample is interesting given these possible influences. From 2015 to 2023, the mean preservation age of this age group increased by 4 years, while the mean AP eligibility age was also approximately 0.5 years higher in 2023. Both would be expected to result in a higher ERA, yet the mean ERA increased less than half a year between 2015 and 2023. This could be influenced by a change in generation mix, as Gen-X made up 40% of the sample by 2023, after consisting entirely of younger Boomers in 2015. However, when the two generations are compared at a similar mean age of 51, Gen-X had a higher mean ERA (64.8 vs. 63.4 years) which would have supported a higher ERA explanation. A limitation of this comparison is that Gen-X is observed with this mean age in 2023 whereas for younger Boomers it was 2011. In terms of changes in mean ERA post-

COVID-19, no clear trends emerge by age group or for younger Boomers or Gen-X. There are some small differences by gender. Among males aged 49–52, mean ERA reduced up to 1.7 years by 2023, while it increased by 0.5 years for females.

3.1.2 | PRA

Figure 2 illustrates a summary of mean PRA for those with a numeric PRA response, as well as the proportion answering *Never*, *Don’t Know*, and those retired. A breakdown is presented by age group (Panels a and b) with corresponding breakdowns by generation in panels c and d. Overall, mean PRA increased across each age group over the full 2003–2023 sample period, though more modestly than ERA. For example, the increase in ERA across age groups ranged from 2.3 to 4.1 years, versus 0.6 and 2.2 years for PRA. Mean PRA trended up over the waves to 2015, but has stagnated since, similar to ERA. The differences in PRA either side of changes to AP eligibility age (2011 vs. 2007) are not always of the same magnitude or direction. For example, mean PRA for the youngest and oldest age groups were

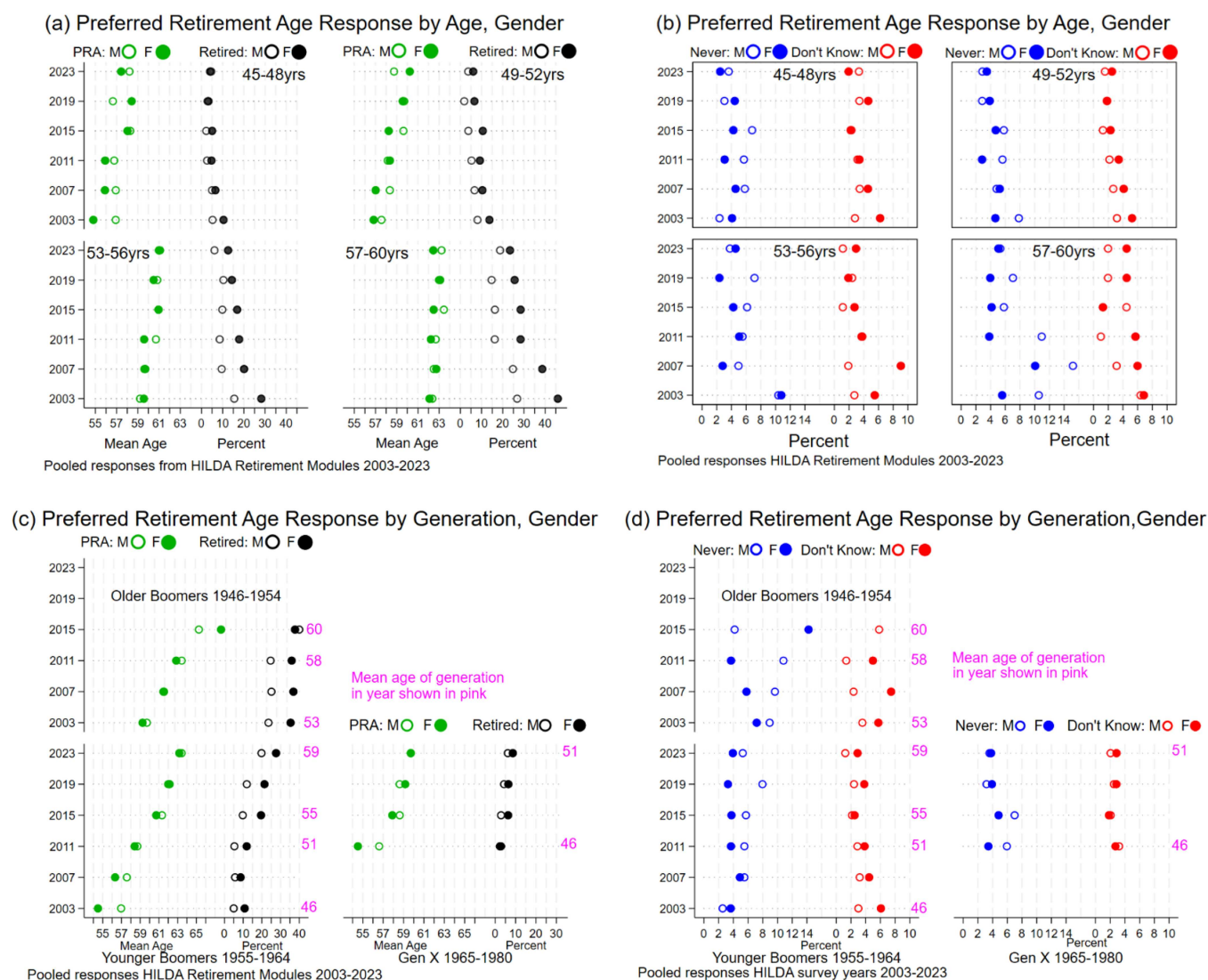


FIGURE 2 | Preferred retirement age (PRA) by age group and generation. This figure summarises PRA responses by age group (panel (a) and (b)) and generation (panel (c) and (d)). Panel (a) and (c) present mean PRA, for those with a numeric response, and the proportion retired. Panel (b) and (d) show the proportion responding with ‘Never’ and ‘Don’t Know’. Panel (c) and (d) also show the mean age of the generation sample for the year.

lower in 2011 against ERA increases. The largest PRA increases were between 2011 and 2015, as with ERA, though the latter were at least 50% larger, excepting for the youngest age group whose mean PRA increase (1.8 years) was comparable to the ERA increase.

Figure 2 indicates that, in contrast to ERA, gender differences in mean PRA across age-groups (Panel a) are small and inconsistent in sign over time. The proportion of those who prefer never to retire is marginally lower than the proportion of those who never expect to retire. For example, of those not retired in 2023, 6.5% never expect to retire and 4.2% prefer never to retire. Of those who never expect to retire more females than males (50% vs. 40%) also respond that they prefer never to retire. Of the remaining half, the mean PRA is 65. The increase in mean PRA over time is seen for each generation (Panel c), though lower than the increase in mean age of the generation or increases in ERA. For example, while the mean age of the sample of younger Boomers increases 13 years between 2003 and 2023, mean PRA increases approximately 7 years. The change in PRA for Gen-X largely matches the aging of the sample between 2011 and 2023, increasing 5 years. Panel c indicates that changes in mean PRA across generations are largely the same by gender with no consistent differences. As noted in the analysis of ERA, there is a challenge in identifying generational shift in PRA given that generations age over time and only have comparable mean ages in different years. Notwithstanding, there is some evidence of a small increase in PRA. For example, when the Gen-X sample is comparable to younger Boomers (51.4 vs. 51.1 years in 2023 and 2011), PRA of Gen-X is 1.2 years higher. Similarly, younger Boomers' mean PRA was 2 years higher than older Boomers at similar ages (54.9 vs. 54.0 years in 2015 and 2003 respectively).

3.1.3 | Rounded Retirement Ages

Of those with a numeric ERA or PRA response, 'rounded' ages such as 55, 60 and 65 are prominent. Rounded numbers (ages, in this context) can act as cognitive reference points which serve as key anchors (Rosch 1975). Use of a 'round number heuristic' in retirement planning is evident in relation to savings rates and asset allocation (Benartzi and Thaler 2007), while Hess (2018) documents it in the preferred and ERAs of German workers. Ilmakunnas and Ilmakunnas (2018) report concentration of ERAs at 'focal point' ages, including 60, 63 and 65, where the latter two have key relevance in the Finnish pension system. In Australia, rounded ages have also featured prominently in retirement policy over the analysis period, including the superannuation preservation age (bookended at 55 and 60) and the previous pension eligibility age (65). Hence, independent of the heuristic, rounded ages are expected to be salient when answering the ERA and PRA questions, because they are directly relevant to respondents, or relevant in aggregate.

Figure 3a,b compares the distribution of ERA and PRA responses, respectively, in 2007 and 2023 for those aged 49–52. For ERA, five ages (50, 55, 60, 65 and 70) account for 87% of the numeric responses in 2007. By 2023 this had dropped to 73%, but when the new pension eligibility age of 67 is included the proportion increases to 86%. For PRA the corresponding proportion accounted for by the same five ages is 80%.³² Reconciling the change in distribution of responses in Figure 3 with

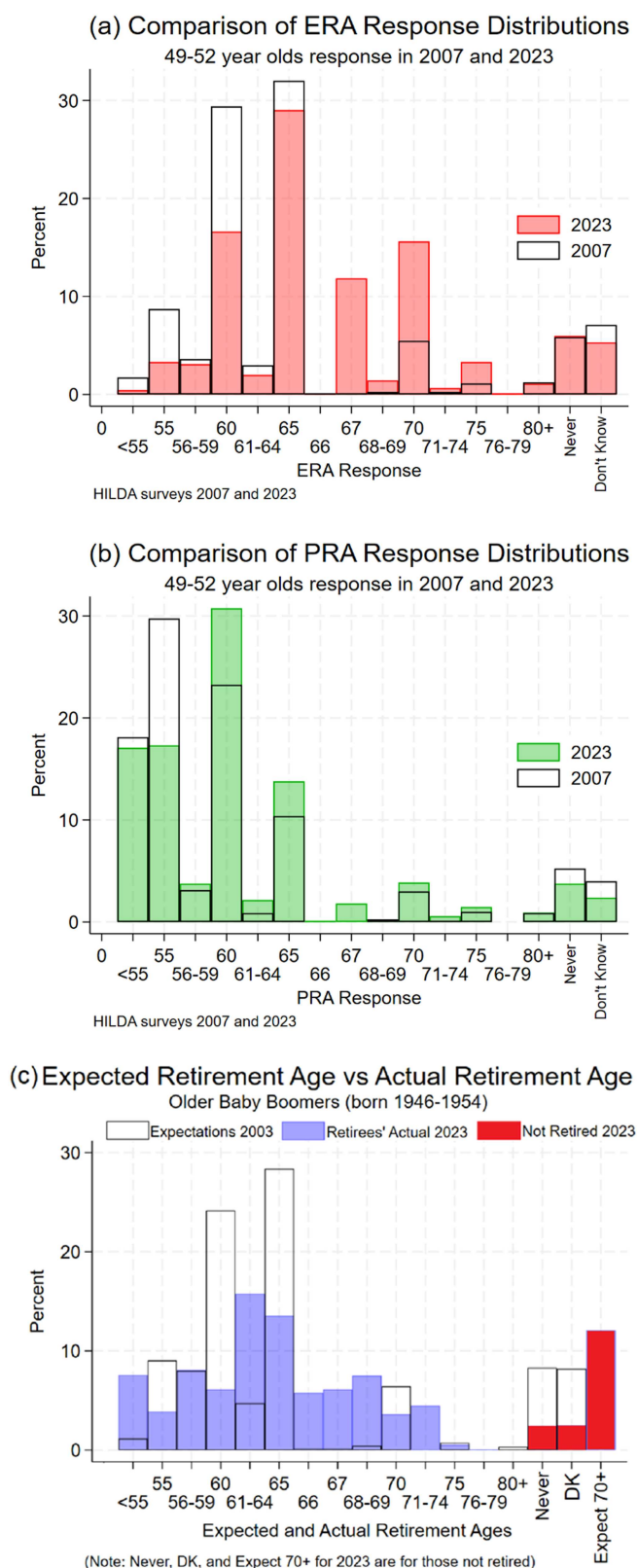


FIGURE 3 | Distribution of expected, preferred and actual retirement age: selected ages and years. This table presents a comparison of the distribution of ERA responses of 49–52 year olds in 2007 with those in 2023 (a), with a comparable comparison of PRA in (b). Panel (c) compares the ERA of older baby Boomers in 2003 with their actual reported retirement age in 2023. The latter also includes the ERA response of those not completely retired in 2023.

the mean ERA and PRA in Figures 1 and 2 suggests that much of the upward trend in mean ERA and PRA is accounted for by 'jumps' in ERA responses from 60 to 65 and 65 to 67 and 70, and 55 to 60 and 65 for PRA. Though rounded ages are evident in actual retirement ages, it is less so relative to that for ERA and PRA. While analysis of actual retirement age is beyond the scope of the current paper, Figure 3c provides a comparison of older Baby Boomers' 2003 ERA response with their actual retirement age reported by 2023.³³ The actual retirement age distribution is flatter. Nonetheless, approximately 34% of reported retirements occurred at age 50, 55, 60, 65 or 70, with clear 'spikes' at ages 55 (4%), 60 (8%) and 65 (17%).³⁴ Future research could usefully investigate the role of these rounded ages including identifying respondents predisposed to nominating rounded ages, and their relevance to actual retirement age.

3.1.4 | Differences in Housing Tenure and Retirement Age Expectations

The discussion of retirement income policy in Section 2 noted the role of housing as a key part of a fourth retirement income pillar, particularly in the Australian context (Chen et al. 2024; Yates and Bradbury 2010). Housing tenure type and associated affordability of housing costs are expected to interact with retirement income policy effects. A detailed look is beyond the scope of this paper, but to investigate at the broad level we disaggregate the mean ERA of Figure 2 by housing tenure type, focusing on the 49–52 age group. Figure 4a indicates a clear hierarchy with ERA higher for renters relative to owners with a mortgage (average 1.7 years), and mortgage versus outright owners (average 1.1 years).³⁵ Some of the wider gaps between mortgage holders and outright owners appear, somewhat surprisingly, at the latter stages of the 12-year decline in standard variable mortgage rates from 8.3% to 4.9% to 2019 (Reserve Bank of Australia 2025). However, over the same period average loan size increased 71% higher (Australian Bureau of Statistics 2023). The widest gaps between renters and mortgage

holders appear between 2018 and 2021 as interest rates reached their lowest level over the analysis period and as median rents started a sustained increase (Australian Bureau of Statistics 2025). To further investigate the role of housing, Panel b further disaggregates by the proportion of housing costs. Those mortgage holders and renters spending more than 30% of household disposable income are classified as facing potential 'stress' given the relatively higher levels of housing costs.³⁶ While there appears no consistent pattern within mortgage holders, post-2018 the gap increases for those renters potentially 'stressed'. Supporting Information S1: Figure A4 suggests that the hierarchy of ERA by housing tenure is consistent across age groups, but the differences by potential stress are less so. A more detailed analysis of the role of housing costs would consider other relevant factors, including gender, location and number of dependents.

3.1.5 | Gaps Between PRA and ERA

The previous discussion highlighted that overall, mean PRA was generally lower than mean ERA, though both increased over time—albeit less so since 2015. Figure 5 summarises individual gaps between ERA and PRA, by providing a profile of the proportion of respondents in any year with different magnitudes of PRA–ERA gaps. Panels a and b provide a breakdown by age group and Panels c and d provide a breakdown by generation. Clearly, most workers prefer to retire earlier than they expect to. Across the age groups (panel a) less than 5% prefer to retire later than they expect (shaded red). Panels a and b indicate that, with only a handful of exceptions, the proportion preferring to retire earlier is larger the younger the age group for each wave. Correspondingly, the proportion with ERA matching their PRA is larger in the older the age group, again consistently over time and by gender. The proportion preferring earlier than ERA grows over time for each age group. While not uniform each year, by 2023 the proportion preferring to retire earlier increases by between 10 and 15 pp relative to 2003. This increase over time for each group is larger for



FIGURE 4 | Housing tenure, stress and ERA: 49–52 year olds. Panel (a) presents mean ERA for 49–52 year olds with a numeric ERA response disaggregated by housing tenure and (b) further disaggregates owners with a mortgage and those renting by housing stress. Those paying more than 30% of household disposable income as housing costs are classified as being in the stress group. A breakdown for all age groups is presented in Supporting Information S1: Figure A4.

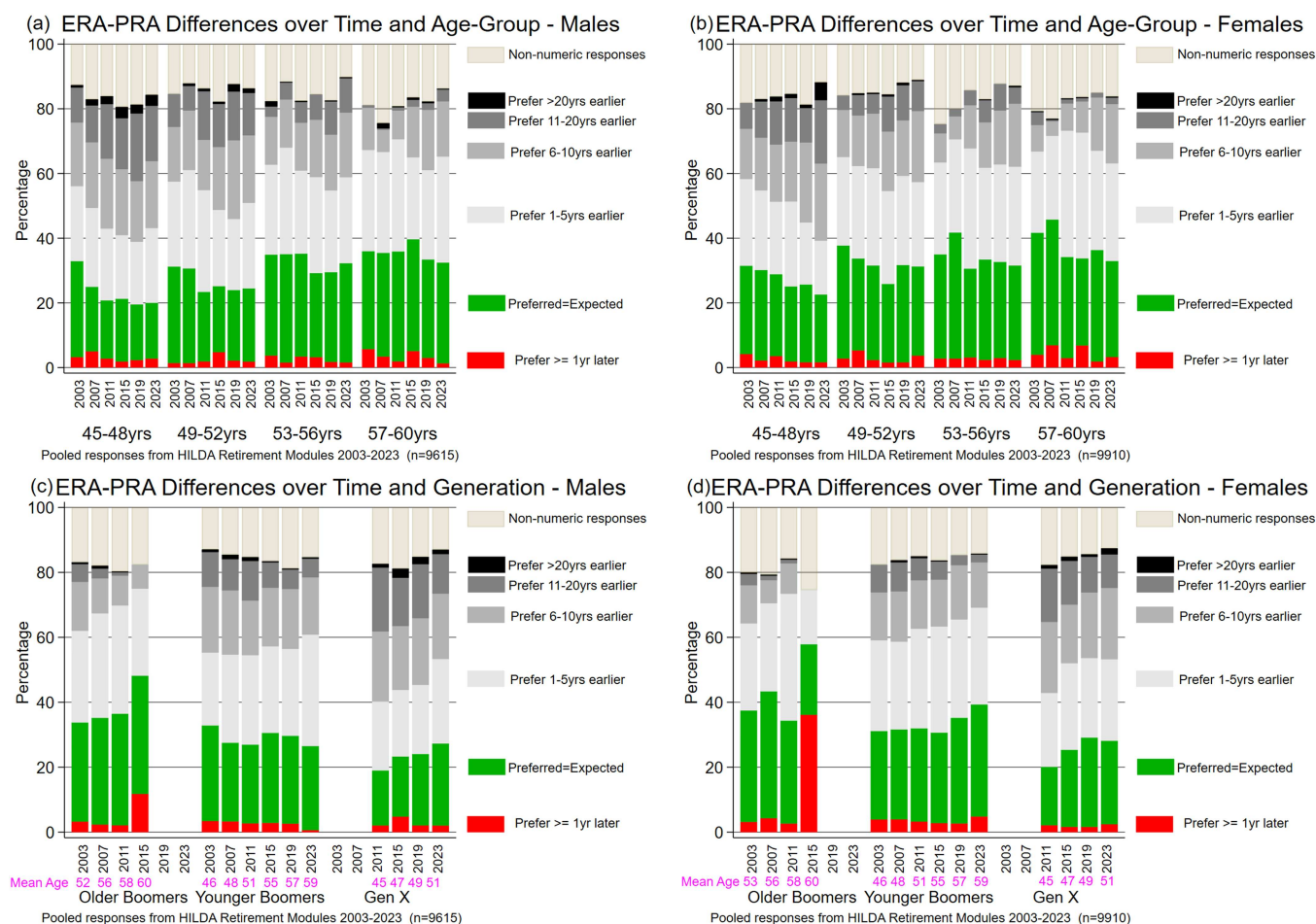


FIGURE 5 | Difference in expected and preferred retirement age. These figures summarise the distribution of differences between individuals' expected and preferred retirement age pooled from the HILDA retirement wave modules. Panel (a) and (b) provide a breakdown by age and panel (c) and (d) by generation. Supporting Information S1: Figure A5 provides a breakdown of non-numeric responses which are shown here as one group. Where a numeric response is provided for both ERA and PRA, responses with ERA > PRA are shaded grey/black, red shading reflects a higher PRA > ERA and green reflects they are the same. Panel (c) and (d) show the mean age of the generation sample for the year.

females (between 3 and 6 pp). In each age group and year, more males tend to have 'unmatched' preferences, as a larger proportion of males prefer to retire earlier than expected, and a smaller proportion reporting no gap. However, a larger proportion of females have 'Don't Know' responses to both ERA and PRA questions.

Panels c and d indicate that the time trend can also be explained by generational differences. Gen-X consistently has a larger proportion of respondents with PRA lower than ERA, and in turn younger Boomers have a larger proportion than do older Boomers. Gen-X makes up a larger proportion for all except the oldest age group by 2019/2023, so the apparent time trend of larger proportions with PRA less than ERA of each age group may be explained by the changing generations rather than by the time trend. In fact, within generation the proportion drops marginally over time or is constant. For example, within the sample of younger Boomers, the proportion of respondents with PRA lower than ERA drops three pp for females and males from 2003 to 2023. For Gen-X the proportion drops four pp for females and increases one pp for males. Hence, generational differences appear more compelling.

The youngest age group first saw an increased preservation age (between 2003 and 2007 waves) followed by an increased AP eligibility age (between 2007 and 2011 waves). This is reflected by the drop in those expecting to retire when they prefer and preferring an earlier retirement age. The clearest contrast to this pattern is for the two oldest age groups, particularly the oldest in 2007 where the proportion with ERA equal to PRA increases, and the proportion preferring an earlier retirement age (i.e., PRA < ERA) decreases. This oldest age group is expected to have larger super balances, and hence the elimination of tax on withdrawals, effective in March 2007, would have been most timely and salient.³⁷ Further, a smaller proportion of the oldest age group was impacted by the 2009 increase in AP eligibility age. The proportion with *Never* or *Don't Know* to both ERA and PRA declines over time for all ages.

3.2 | Within-Person Dynamics in ERA and PRA

The final analysis examines within-person change between waves, allowing comparisons across 4-year periods. This analysis in effect tracks an age group (e.g., 45-48 in 2007) as they

move to the next (i.e., 49–52 in 2011). Summary statistics are weighted by longitudinal weights for the paired waves. The sample is restricted to those 49–60 with a prior response, when the sample is 45–56.

3.2.1 | Movements in ERA

Figure 6a summarises within-person movements in ERA. In the 4 years to 2007, 2011 and 2015 ERA increases are most common. The overall pattern across each period is largely the same. ERA increased for 31%–35% (excluding those retired), remained the same for 26%–28% and reduced for 12%–13%. After 2015, we see a pattern change, with the proportion of respondents reporting lower ERA rising from 12% to 23% by 2023, while the proportion of those reporting higher ERA fell from 35% to 25%. An unchanged ERA becomes the most common (30% and 27% to 2019 and 2023). Also note a smaller proportion of the sample having retired in the 4 years to 2023 (e.g., 8% 2007 to 5% 2023).

As noted, there is a change in patterns in 2015. Post-2015, and consistent across age groups, a reduced ERA is increasingly observed among those moving into their early and mid-50s (e.g., 11% and 12% for those aged 49–52 and 53–56 versus 9% for those aged 57–60; not tabulated) and an increased ERA is less observed (e.g., 12% for 49–52 years versus 9% for 57–60 years; not tabulated). This pattern may reflect the increase in AP eligibility age between the 2007 and 2011 waves for some age groups, as the age group with the largest proportion increasing ERA to 2011 are those moving from the 53–56 to 57–60 years. For other age groups the proportion of respondents increasing their ERA remains unchanged.

Performance of superannuation accounts is also a possible contributing factor for higher ERAs, though evidence here is less clear. The four calendar years post-2007 were the worst of the 4-year blocks over the sample period in terms of performance, and this would be expected to lead to increased ERA. While we do see this pattern in the cross-sectional comparisons

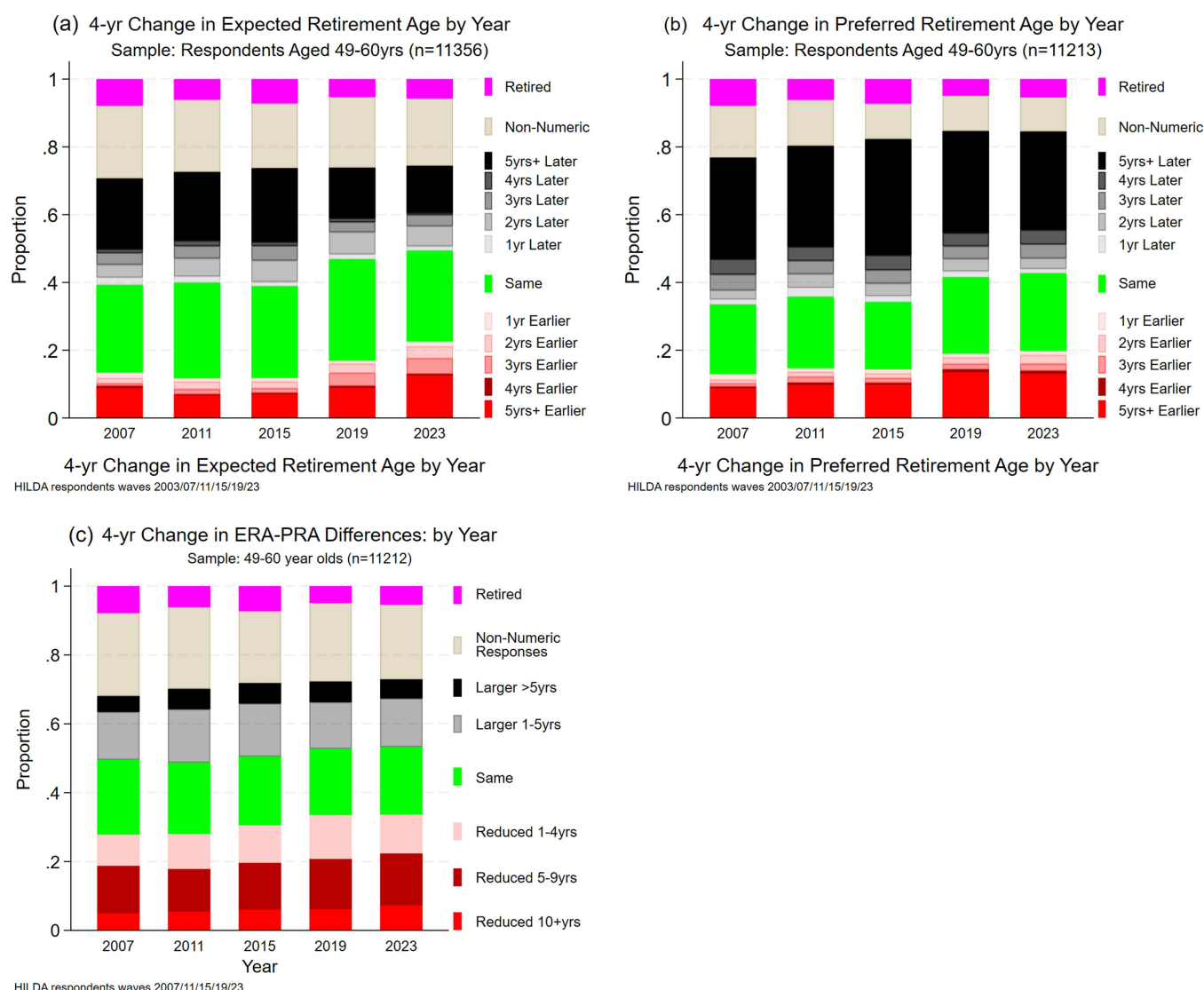


FIGURE 6 | Within-person change over 4 years. This table presents summaries of the distribution in 4-year changes in ERA (a), PRA (b) and differences between ERA and PRA (c) responses between retirement modules, starting with the change between 2003–2007 and ending with 2019–2023. Longitudinal weights are used for the various wave pairings. Supporting Information S1: Figure A6 provides a breakdown of non-numeric responses which are shown here as one group.

reported earlier, evidence from within-person dynamics is mixed. For example, the proportion of increasing ERA was larger in 2011 than in 2007 for those entering their late 50s (57–60 years), but this was not observed for other age groups.

After 2015 the evidence is also mixed. For example, the biggest drop in ERA increases, and the biggest increase in ERA reductions, are observed leading up to 2019 and 2023, when superannuation returns were modest. The proportion of persistent *Don't Know* responses varies between 6% and 8%. Surprisingly, this is generally observed among the oldest age group. The proportion of persistent *Never* responses varies between 5% and 9% over the periods with no clear pattern by age group. Finally, there are respondents who 'resolve' their expectation in the sense that they provide a numeric response having responded *Don't Know* or *Never* 4 years prior. This proportion is generally higher for the older age group, ranging between 5% and 11%, and follows the pattern of declining to 2015 but increasing to 2023. While in absolute terms the proportion is small, the proportion not resolving their uncertainty is a concern.

3.2.2 | Movements in PRA

Figure 6b summarises PRA change. Across years, 20%–25% maintain the same PRA, with greater consistency in those moving into their early 50s compared with late 50s (e.g., 23% for 49–52 vs. 17% for 57–60s; not tabulated). In each 4-year period to 2015, the proportion with a change to a lower PRA is largely stable (15% to 16%). Correspondingly, the proportion changing to higher PRAs increased modestly from 43% to 48% by 2015; more so for those moving into their late-50s, but largely consistent by age. Note that this proportion increasing their PRA is much larger than those increasing their ERA, which also increased to 2015, from 31% to 35%. However, as with ERA, 2015 marks a change, with the proportion increasing their PRA dropping back to 42% of respondents by 2023, alongside a corresponding increase in the proportion lowering their PRA to 2023 (from 14% to 20%).

This suggests a change in preferences prior to COVID-19, which continued 'post'-COVID to 2023. The increased proportion lowering their PRA is consistent across age groups, but largest for the youngest age group, reaching 23% in 2023 (i.e., those entering early 50s in the 49–52 group). While the proportion revising their PRA upward remains the dominant change, it remains most likely for the oldest age group (44%)—those entering their late 50s. The proportion ending with a *don't know* (3%–4%) or *never* response (4%–5%) is lower than for PRA and trended down over time. In summary, the majority of respondents increase their PRA over 4- and 8-year periods, but this trend slowed in 2019 and 2023. While the proportion of respondents who lowered their preferred age over 4 years increased, particularly to 2019 and 2023, this remained a smaller proportion, at approximately one-in-five of respondents, and smaller than the proportion who maintained the same PRA.

3.2.3 | Movement in Gaps Between Preferred and ERA

Finally, we consider whether individuals' expectations and preferences converge or diverge over the 2003–2023 period. That is, we evaluate changes in within-individual gaps between

PRA and ERA over time, as summarised in Figure 6c.³⁸ The most commonly observed change is gap reduction, that is, expectations and preferences converging. Diverging gaps are somewhat less common, but persistent over time (changing from 20% to 23%). These proportions are not offset by those maintaining the same difference or increasing the difference, as they remain similar (between 20% and 23%) over each 4-year period. Greater convergence in ERA and PRA appears more from fewer responding with *Don't Know* or *Never* combinations. While the proportion of respondents providing these responses remains more than one in five, it reduces from 26% to 21% over the survey period.

4 | Summary and Conclusion

Increasing retirement age and extending labour force participation have been a consistent objective of the Australia government over the past two decades, as has been the case in most countries. Without the ability to mandate retirement age, the key available policy levers include the AP (eligibility age, rate and means tests), superannuation (preservation age and contributions caps) and employment policies (i.e., labour force participation). Of these, the policy changes with the clearest and most significant expected impact are changes to AP eligibility age and superannuation preservation age. However, numerous other policy changes, along with significant macroeconomic events, have contributed to create a complex environment in which retirement planning remains difficult both for individuals and policymakers. Generous tax concessions on superannuation contributions and withdrawals, for example, raise private savings—which lowers the reliance on the public pension system, but also allow individuals to retire earlier, and so lower the labour force participation and thereby the tax base.

We observe notable movements in ERA and PRA, both across and within individuals, over time. Both have increased for all age groups from 2003 to 2023, though the change is most pronounced among younger respondents. The increase in both over time can also, in part, be attributed to cohort effects (generational change), with Gen-X (relative to younger Boomers) and younger Boomers (relative to older Boomers) reporting higher expected and PRA. Changes in government policy are a plausible explanation for some of these observed dynamics, during the first half of the period examined, particularly with respect to increases in the AP eligibility age. However, events that coincide with policy changes, such as the GFC and change in superannuation balances, and the role of other retirement income pillars such as housing, means it is difficult to make robust claims of policy impact.

Clearly most workers would prefer to retire earlier than they expect, if they had the choice. While these gaps tend to converge over time for most, they remain or widen for a significant portion of the sample. Changes in the response trend from 2015 to 2023 are notable, though difficult to attribute to time or generational effects. Further analysis can usefully explore the heterogeneity in levels of, and changes in, expected and PRA, as well as the large proportion nominating rounded ages when compared with actual retirement ages. Finally, from a planning perspective, while most can state a specific expected and PRA, between 5% and 10% respond they do not know their ERA,

though providing a PRA appears less difficult. This, combined with the large proportion of workers who make substantial changes, identify groups that can be targeted to help assist with retirement planning.

Acknowledgements

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Conflicts of Interest

The authors declare no conflicts of interest.

Endnotes

¹ Mean Cohen effect size in finance is 0.24 compared with 0.65 for food and 0.34 for health.

² That is for an account-based pension, the product chosen by the majority of retirees not withdrawing a lump sum. Super can be left in the accumulation phase, though there is a tax penalty relative to the pension phase (i.e., 15% vs. 0%).

³ The Age Discrimination Act 2004 prohibits discrimination by age, but exceptions include federal judges (age 70 years, following a referendum to change the constitution in 1977) and the Australian Defence Force (reaching 60 years).

⁴ The Social Security Legislation Amendment Bill (No. 2) 1994 was the first change in eligibility age since 1910. When the Old Age Pensions Act was first passed in 1908, the eligibility age was 65 years for males and females, but was adjusted in 1910 to 60 years for females. The 1994 change increased eligibility age 0.5 years for 18-month cohorts beginning with those born 1 July 1935 to 31 December 1936 so that for females born from 1 January 1949 onwards 65 years was the new eligibility age. Many of the changes parallel UK changes. For example, the 1995 Pensions Act increased UK women's state pension age to 65 years, with the 2007 Pensions Act increasing the age eventually to 66, 67 and 68 years. Subsequent Acts accelerated when changes became effective (Department for Work and Pensions 2023).

⁵ This expected reduction in Atalay and Barrett (2015) assumes a full benefit payment. A complication in the Australian system is the interaction of labour participation and means-test eligibility via superannuation. That is, given compulsory employer superannuation contributions, benefit payment is reduced based on a higher superannuation balance.

⁶ The new eligibility ages were: DOB < 1 July 1952, 65 years; 1 July 1952 to 31 December 1953, 65.5 years; 1 January 1954–30 June 1955, 66 years; 1 July 1955–31 December 1956, 66.5 years; ≥ January 1957, 66 years.

⁷ While indexation was first used in 1932, the link to the Consumer Price Index was legislated in 1976. Similarly, the link to MTAW was first made in 1975 but was not legislated until 1997 (Commonwealth of Australia 2001a).

⁸ The benchmark reference was also changed to the combined maximum basic pension couple rate rather than the single rate. The combined couple rate was benchmarked to 41.76% of MTAW with the single rate 66.33% of the couple rate. For more information, see Australian Government (2025). A new Pensioner and Beneficiary

Living Cost Index was also introduced as an alternative indexation check of cost of living changes.

⁹ At the same time, multiple supplements (phone, utilities, GST, pharmaceuticals) were consolidated into a single (increased) supplement. A new (Clean) Energy supplement in 2012 was again framed as compensating for price increases. Other benefits not exclusively age-based are also received by AP recipients, such as Rent Assistance (RA).

¹⁰ The test resulting in the lower pension benefit is applied.

¹¹ Thresholds are adjusted three times a year in March, July, and September.

¹² *Superannuation (Objective) Act (No. 124, 2024)* (Cth), s5.

¹³ Strict preservation rules are a feature of the Australian system and allowable conditions of release are listed in Schedule 1 of 'The Superannuation Industry (Supervision) Regulations 1994 (Commonwealth)'. While 'early' access is allowed under the regulations before preservation age, for example, for compassionate grounds or financial hardship, the system has relatively small amounts of 'leakage'. For example, in the financial year to June 2019, \$15.5 billion was paid to workers having retired or reached preservation age, \$0.4 billion was paid out on compassionate grounds and \$0.6 for severe financial hardship (based on all funds in Table 4, Australian Prudential Regulation Authority 2023).

¹⁴ *Superannuation Industry (Supervision) Regulations* (1994) (Cth) reg 6.01.

¹⁵ Preservation ages: < 1 July 1960 55 years, 1 July 1960–30 June 1961 56 years, 1 July 1961–30 June 1962 57 years, 1 July 1962–30 June 1963 58 years, 1 July 1963–30 June 1964 59 years, > 30 June 1964 60 years.

¹⁶ *Superannuation Industry (Supervision) Amendment Regulations* 2005 (No. 2).

¹⁷ Explanatory Statement, Select Legislative Instrument 2005 No. 56, Retirement Savings Accounts Act 1997, *Superannuation Industry (Supervision) Act* 1993, 4. https://classic.austlii.edu.au/au/legis/cth/num_reg_es/siar20052n56o2005772.html

¹⁸ The rate reached 12% from 1 July 2025.

¹⁹ The contribution caps in 2006/2007 were: < 35 years \$14,603 p.a.; 35–49 years \$40,560 p.a., 50–69 years; and \$100,587 p.a. From 2007/2008 for those < 50 years the cap was \$50,000 and for from 50 years it was \$100,000.

²⁰ At the time a worker faced a reasonable benefit limit (RBL), the maximum lifetime retirement benefit able to be received concessional. A form of RBL was re-introduced from July 2017. A \$1.6 million cap was introduced on how much could be transferred from the accumulation phase of superannuation to the tax-free pension/drawdown phase. The amount is indexed and will be \$2 million from July 2025.

²¹ Strictly, this applies to workers in 'taxed' funds. Most Australian workers are in taxed defined contribution (DC) funds in which compulsory employer contributions are taxed at 15% when deposited to a worker's account. Some workers pay a higher rate (30%) if their concessional contributions plus income exceeds \$250,000. However, some government workers are members of constitutionally protected funds that are untaxed funds as the Federal government is unable to tax state government assets. Members of these funds face a tax when funds are withdrawn to compensate for no tax on contributions and earnings (see Australian Taxation Office 2023). HILDA data do not contain information at this granular level to determine whether a member is an untaxed or taxed fund.

²² Another complication to discussion of tax is that we are assuming a 'taxed' fund which is the case for a majority of workers. However, workers could be members of untaxed funds (e.g., state government workers) where tax is not collected on contributions or earnings but

- is collected on withdrawal. For a discussion of the history of taxation more generally, see Commonwealth of Australia (2001b).
- ²³ See Australia Taxation Office (2025) for a history of match rates, caps, and income thresholds.
- ²⁴ Tax Laws Amendment (Stronger, Fairer, Simpler and Other Measures) Act 2012.
- ²⁵ Treasury Laws Amendment (Fair and Sustainable Superannuation) Act 2016.
- ²⁶ For example, the 2006 reforms were estimated to cost \$7.2 billion over 4 years (Parliament of Australia 2006).
- ²⁷ Pre-2007 the taper rate was effectively 7.8% for de/increases in assets whereas it became 3.9% in 2007 (until 2016).
- ²⁸ See <https://melbourneinstitute.unimelb.edu.au/hilda>
- ²⁹ What constitutes 'retirement' is not prescribed. However, retirement status is classified by a question that emphasises 'paid employment' (*esbrd*): 'The next set of questions is about retirement from paid employment and your plans for retirement from paid employment. Do you consider yourself to be completely retired from the paid workforce, partly retired or not retired at all?'. The ERA and PRA questions are only asked if the respondent answers that they are 'Not retired at all' or 'Partly retired' rather than 'Completely retired' or 'Not relevant—have never been in paid work'. Those responding with the latter (response (3) to variable *esbrd*) are classified as retired if they also answer were classified as retired if they answered yes to 'Retired completely from the workforce' (response (2) to either *rtcomp* or *rtcompn*). Using self-classification introduces a problem as 'retirement' can mean 'different things to different people' (Warren 2015, 147).
- ³⁰ In the first two waves of the survey, the question asked was 'At what age do you plan to retire (completely) from the workforce?'. In 2004 and 2005 the question was not asked to the existing panel of respondents, only to the small number of new respondents who joined the panel in each year.
- ³¹ The Social Security Legislation Amendment Act 1993 progressively increased the eligibility age for females from 1 July 1995 so that by 2014 it was to be equal to male eligibility age of 65 years. The 2009 policy changes discussed in Section 2 subsequently increased preservation age to 67 years for both males and females.
- ³² Similar patterns are observed for other age groups which are reported in Supporting Information S1: Appendix Figure A4.
- ³³ Of the responding older Baby Boomers surveyed in 2023, 83% are 70 years or older. There are limitations in this analysis including exclusion of those who have withdrawn from the survey (e.g., deceased),
- ³⁴ Constructing these estimates requires several choices as to who is included and excluded. Of the former, the proportion is based on those with an ERA response in 2003, who are retired in 2023, and reporting a retirement age of at least 50 years. This excludes approximately 18% who report as not completely retired in 2023 and also excludes those, predominantly older respondents, who are no longer in the panel. Note also that actual age of retirement is not necessarily singular as retirees return to work, plus reported retirement age changes over waves irrespective of a return to work.
- ³⁵ Supporting Information S1: Appendix Figure A4 provides a breakdown by all age groups which indicates the same hierarchy is consistent.
- ³⁶ Marks and Sedgwick (2008) note that definitions of housing stress are arbitrary. They use 30% of gross household income as one threshold whereas other definitions use 30% of disposable income combined with disposable income being in the bottom 40% (Australian Institute of Health and Welfare 2025). Ong and Rowley note that even the same apparent definitions vary in terms of income definition, household composition adjustments and location (availability of services).
- ³⁷ However, balances were relatively modest. For example, in 2007 while employees superannuation coverage was 94%, the median balance was \$45,000 for those 45–54 and \$72,000 for those 55–64 (Australian Bureau of Statistics 2009).
- ³⁸ Note that, given that there are more permutations where a *Don't Know* or *Never* response can be provided for either ERA or PRA in a current or previous wave there are larger proportions in the non-numeric categories in this part of the analysis.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.

Figure A3: Distribution of Expected Retirement Age: All Ages, and Select Years. **Figure A4:** Housing tenure, stress and ERA by Age. **Figure A5:** Difference in Expected and Preferred Retirement Age. **Figure A6:** Within-Person Change over Four Years.