

Pension Policy Obstacles | Fernando Larraín (2019)

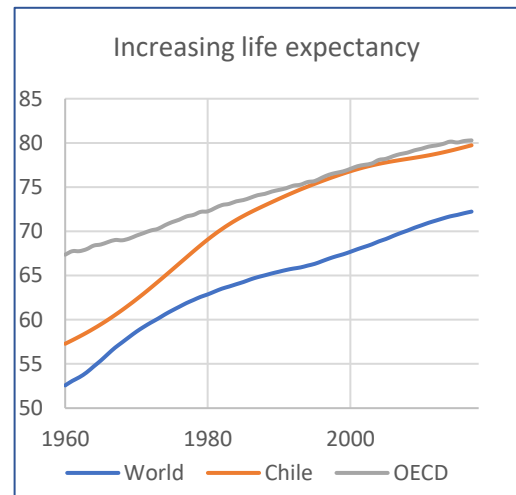
Abstract: The article covers three questions: 1. *What challenges do pension systems face in today's changing world?* Increased longevity and the aging population, the shift in labour markets with technology and the Millennials generation demand careful adaptation of pension policy. Defined contribution schemes provide solutions but need to be sensibly designed. The two central questions policy makers face in this regard are 2. *Who should take the pension investment decisions?* and 3. *How should life cycle strategies be designed?* All over the world, experiences reveal investment inertia: the inability of members to take investment decisions calls for experts to design appropriate default strategies. These need to take into account various non-trivial risk factors that could otherwise cause dramatic pension welfare losses.

Dilemmas in Today's Pension Systems

Longevity Risk

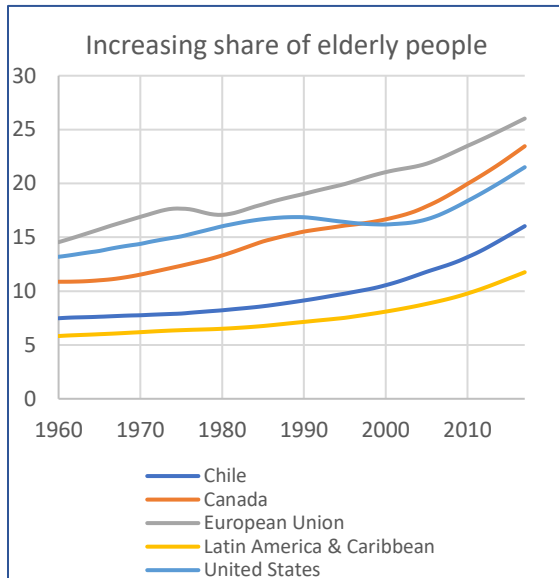
The world's pension systems are facing drastic demographic change: with the improvement of health care systems, medical treatments and nutrition, people live longer and the population of most nations gets older. **Longevity risk** is reflected in the increase in the life expectancy. The World Bank Group reports that while a person born in 1960 in the OECD was expected to become 67 years old, he is now expected to become 80 years old, that are 13 years or almost 20% more life time than in 6 decades ago. In Chile this increase has been even more sharp: it rose from 53 to 80 years or by around 32% (World Bank Group, 2019).

Simultaneously, the **share of the elderly people in our society has been growing all over the world** in the past decades. In Latin America and the Caribbean, the share of people aged 60 and above as a share of the total population rose from 5.9% to 11.8% over the past 60 decades. In Chile, the increase was even steeper from 7.5% in 1960 to 16% in 2017.



Source: World Bank Group (2019)

The projections by the United Nations foresee that Chile's share of elderly people will continue to increase more than proportionally overtaking the United States by 2050 with a share of 30.6% of 60+ year olds (World Bank Group, 2019) (Figure in Appendix). This poses **challenges to pension systems' financial sustainability**. As the population gets older, the years of life as a pensioner increase and need to be financed. Defined benefit systems rely on the inter-generational contract, i.e. young workers finance pensions of the elderly through taxes. As this pension model proves unsustainable under the growing age-dependency ratio, many countries seek solutions to moderate their **accelerating tax expenditures**. Meanwhile, in defined contribution systems, the



Source: World Bank Group (2019)

pensioners themselves need to pay for the increased longevity: the monthly pension income is reduced in order to cover more years of life-time. Respectively, many countries start adopting defined contribution plans complementing the pay as you go (PAYG) system progressively shifting more responsibility on the individual to save for his personal pension plan (OECD, 2017). Moreover, **increasing the retirement age and even fixing it to life expectancy** have been common strategies to ensure the sustainability of pensions in the past years.

Between 2015 and 2017, the statutory retirement age was increased in six OECD countries and policies to increase retirement age have been implemented in about half of the OECD countries, with links to life expectancy in Denmark, Finland, Greece, Hungary, Italy, Korea, the Netherlands, Portugal, the Slovak Republic Denmark and Turkey (OECD, 2017). The OECD finds that on average, the normal retirement age will increase by 1.5 years for men and 2.1 years for women, reaching just under 66 years around 2060. This means that, on average, the retirement period will increase relative to people's working lives. A third approach to financing longevity is to **increase (mandatory) contribution rates and provide incentives to voluntary savings**. About one-third of OECD countries changed contribution rates between 2015 and 2017 (OECD, 2017).

Chile's current pension reform is dedicated to increase retirement age, too. In fact, the **effective retirement age is around 7 years higher than the retirement age by law**. This can have three reasons:

1. intrinsic motivation to work longer,
2. effective incentive structures provided by the system to work longer, and/or
3. the necessity to work longer given an otherwise insufficient pension income.

Evidence suggests that the latter is the more realistic cause in the developing world (Podcast from DW).

Millennials: The New Work Force

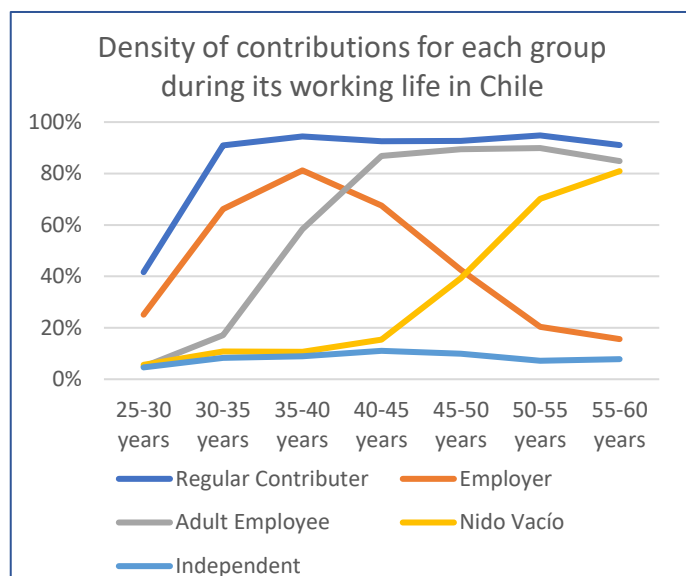
Besides a changing demographical structure, pension systems face social change in the workforce and changing labour market structures. Hence, pension plans need to be redesigned to fit the current worker, the millennial. Millennials include workers that currently enter the working life up to workers that are presumably at the peak of their careers (around 40 years old). Even though any stereotype should be considered with criticism, some quite deterministic features of the millennials can be identified. Less traditional values and increased appreciation of speed, ease, efficiency and convenience combined with a sharpened desire to find meaning and purpose are characteristics that distinguish millennials from non-millennials. A general trend can be observed in the empowerment of women and gender equality. Households more often exist of two full time workers and paternity leave is increasing. Moreover, Boston Consulting Group find that the Millennial has a deep desire for connection and shared experience also offline. Therefore, they

are more likely to engage in group activities, especially with people outside their immediate family. They dine, shop and travel with friends and co-workers and believe that collective action can make a difference. The desire for connectivity and convenience results in greater wish for flexibility. A general trend observed as well shows increased mobility and (non-) voluntary migration. Finally, global development has seen many countries lifting a poor working class into a middle class, millennials enter this middle class. The increased wish for flexibility and mobility poses a challenge to pension systems. It calls for a)

Directly linked to the Millennials is the [technological change that has been defining economic development and social structures](#). Hershatter and Eppstein (2010) find that the Millennials' digital affinity brings positive and negative side-products: Millennials seem more effective in multitasking, responding to visual simulation and filtering information but less adept in terms of face-to-face interaction and deciphering non-verbal cues (Small and Vorgan, 2008). Moreover, when a quick answer is readily available, Millennials tend to lack the motivation to seek a more nuanced one, and by failing to diligently follow a path of inquiry, they miss perspectives that would enable them to evaluate the analysis of others. Nielsen (2016) find that Millennials spend about 1 hour per day on social media (4 hours on total media). [This has implications on the pension systems in two ways a\) how to approach this generation using technology for financial education and b\) how to adapt to the resulting changes in the labour market structures.](#)

Labour Market Changes and Implications for Pension Systems

The younger half of the current work force is subject to labour market changes caused by demographic, social and technological change and economic integration (World Bank Group, 2018). However, the millennials find themselves in increasingly urban labour markets defined by past generations. While past generations established themselves in the labour markets working for companies, with fixed hours and "traditional" (9-5) jobs, millennials seem to prefer independence (entrepreneurship) and more flexibility in their daily work life (flexible hours). The wish for flexibility



Source: Habitat AFP

and independence by millennials can lead to [more labour rotation, more short-term contracts, more self-employed people and free-lancers and finally to more informality](#) (World Bank Group, 2018). An important issue that governments will need to address is to define the roles (employed, independent) of those micro-entrepreneurs and to build regulations and institutions, that keep the freedom of those employment relationships, but also ensure adequate protection and taxation. In Chile, it is observed that the contribution density to a pension plan is very low for independent workers (Figure). The increasingly flexible worker profile is especially important for the design of pension systems. It shifts more weight onto voluntary pension pillars and asks for

new contribution methods and more incentives to contribute to a pension plan and. A central question to policy makers is hence: how can we design pension plans that include the Millennials? The generation that enter the traditional job-market significantly later than the preceding generation, the generation of free-lancers, micro-entrepreneurs in untraditional job-types, the informal labourers? A pension plan that include the flexible travelers that work in several countries over the course of a few years? Can we design international pension schemes, or a pension passport?

At the same time, [the Millennial generation faces uncertainty in the labour market](#), as labour markets are undergoing a significant transformation driven by technological change at the moment. Technological change impacts the labour market through three main channels: connectivity, automatization and artificial intelligence and innovation.

- **Connectivity:** More connectivity through advanced communication and transportation technology leads to higher labour mobility and decreases the costs of transactions: Improved access to markets and resources helps firms grow and create jobs or attract work to new markets that are more competitive. The power of lowering transaction costs for job generation and better earnings is especially pertinent in low and middle-income countries. Here, the cost of transacting is often obstructively high, preventing firms from expanding to supply both domestic and external markets. The consequence is economic integration that comes along with larger and more competitive markets, migration within and beyond borders, growth of the commerce of intermediate products, internationally integrated production chains, deindustrialization and dominance of service sector: overall, an increase in productivity.
- **Automation and Artificial Intelligence:** These solutions provide lower costs and higher productivity, however, not only do these novelties replace jobs, they may also be leading to a polarization of their labour markets putting upward pressure on inequality within countries. Reshoring of tasks and work back to the advanced economies threatens to disrupt labour markets in the developing world. It would also prematurely close the door to formal wage job creation in export-led manufacturing sectors in low-income countries with a huge youth bulge. The OECD (2016) find that 9% of OECD jobs are automatable. McKinsey (2018) find that worldwide around 5% of jobs are fully automatable in about 60 percent of occupations, at least one-third of the constituent activities could be automated, implying substantial workplace transformations and changes for all workers.
- **Innovation:** Technology opens the door to new types of markets, solutions and business models and thereby also to new employment relations and labour market structures. Striking examples are Uber and AirBnB. These examples hint at another change that will increasingly determine business models and labour markets: the sharing economy that is also driven by the changed consumption behaviour of the millennial generation with preferences to rent over buy.

Pension schemes need to be designed in a way to provide security to the people under uncertain labour market shifts but also adapt to the technological change and make use of it: For example: Use artificial intelligence to provide inexpensive financial advice and more individual pension plans to the broad mass. Find innovative ideas to connect to and financially educate the new generation. And assist in smoothening the job transitions in terms to ensure stable retirement savings.

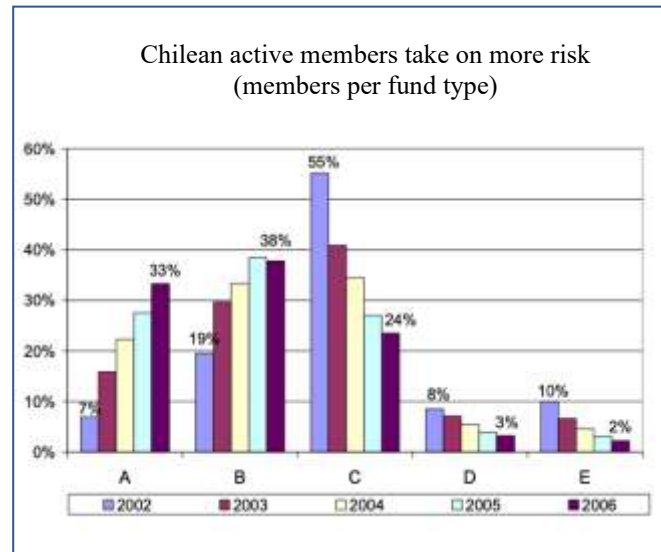
Who should take the pension decision?

Well thought out investment decisions are key to pension welfare in today's pension world of defined contribution. Research carried out by Viceira (2012), Maurer et al. (2007) and others show that not accounting for other type of risks, that might affect the members labour income, can create dramatic welfare losses. Life-time labour earnings may be uncertain due to individual-specific reasons or to macroeconomic conditions (idiosyncratic or systematic risk to human capital) such as unemployment, adverse professional developments, declining real wages, or permanent disability but also unexpected positive developments such as promotions or job offers. But

increasingly other risk factors less obviously related to pensions risks play a role, such as the impact of climate change, extreme weather events, food and water crisis, international conflicts, etc. Moreover, technological change and the labour market changes pose additional uncertainty on the Millennials labour income. Maurer et al. (2007) find that **not accounting for the participant's risk aversion (or budget) in the asset allocation strategy can lead to utility losses of up to 60 percent**. A report by the Australian Productivity Commission found that **member fees drastically erode members' pension balances, that returns vary greatly** and fees do not reflect the rate of return (Australian Productivity Commission, 2019). In a large market that offers uncountable pension products like the Australian one, a worker finds it hard to make the best choice and provenly do not opt for the best option. Investor behaviour in Sweden reveals a bias

Call for Experts: Why are members incapable of taking investment decisions?

- Lack of financial illiteracy: Not being familiar with financial evaluation and the risk return trade-off
- Lack of confidence in own abilities: not trusting in the own abilities to make such decisions
- Lack of information and willingness to inform themselves properly
- Lack of access to financial advice
- Irrational decision-making: decisions driven by emotions since own welfare at stake
- Lack of revision of pension plan/ fund/ investment choice
- Intransparency and excess of investment choices



Source: Tapia and Yermo (2007)

to invest more when valuations are high and less when they are low, precisely the opposite of what rational investors should be doing. The Chilean experience also suggests investment inertia, even though only a few pension fund administrators operate in the market. On the one hand **high default take-up rates** and on the other hand **active members taking a substantial level of equity risk** in their retirement portfolios suggest that the broad mass of people is incapable of making sensible investment decisions (Tapia and Yermo, 2007). Moreover, a survey published in 2006 documents that only one-third of participants know how many funds there are in the investment choice scheme and only around one-fifth can give the correct total number of funds. Further, only 16% of participants know correctly their type of funds (Economics Department of the Universidad de Chile, 2004).

To overcome the incapability of the individual, default options are designed for the members who do not take active investment decisions. In Sweden, the default investment strategy was structured in order to reflect the asset allocation of an average investor in the system. In CEE countries, policy makers decided that the default option should be structured as a non-risky option. Finally, in Latin American countries, the default investment strategy follows a life-cycle profile, which means moving to lower risk funds as the pension saver gets older. Latin American policymakers have been more cautious with respect to investment choice (Tapia and Yermo, 2007). However, as it turns out, policy makers might also not be the right ones to take the decisions. A study by Andonov et al. (2016) reveals that [representation on pension fund boards by state officials or those appointed by them is strongly and negatively related to the performance of private equity investments made by the fund](#). The reasons for this underperformance do not root in the state officials' lack of financial experience. Nor can contributions from the finance industry to elected state officials on pension fund fully explain the performance differential. Hence, there are other, presumably political reasons that drive state officials to take investment decisions that are not optimal for the pensioners.

If the individuals are not capable of taking the decisions and the politicians' decisions might not be objective enough to generate maximized pension welfare for the people, who should be in charge for taking the decisions? The combination of the incapability of individuals, the subjectivism of politicians and the severance of suboptimal investment decisions calls for experts to take responsible decisions and to design the pension system in a way to protect the member from his own incapability while leaving enough space for capable members to exploit the market.

How to design the investment life-cycle plan?

The academic literature agrees that life cycle strategies offer protection from pension income downside risks. The particular optimal design of a life cycle strategy however depends on various individual and country-wide risk factors. The life-cycle strategies vary regarding

- investment style [deterministic or dynamic¹]
- function according to which risk exposure decreases over life cycle [e.g. linear decrease, step-wise (Chile), piece-wise (Vanguard, US)] and
- fund structure [1 fund or multiple funds].

Furthermore, the design of the pay-out phase is part of the life-cycle strategy and significantly impacts what type of life-cycle strategy is optimal (Antolin et al., 2010). Some researcher find that dynamic strategies always outperform deterministic strategies (Spitzer and Singh, 2008; Guillen et al., 2010; Bagliano et al., 2009; Basu et al., 2009). However, once accounting for labour income, inflation or interest rate risk, the picture is less obvious. Evidence suggests that [individually adjusted dynamic investment strategies do not provide much added value as compared to simpler deterministic strategies, especially not for highly risk intolerant members](#) (Maurer et al., 2007; Viceira, 2012; Bagliano et al.; 2009). This means that default options, or deterministic investment plans, are not only very cost effective but also get relatively close to the expected replacement rates gained from an expensive dynamic investment style. As to the optimal design of the life cycle, the literature does not provide obvious consensus. Some find support for a strategy that keeps the equity share constant up until 10 years before retirement age and a gradually reduces

¹ A dynamic strategy adjusts the portfolio's equity risk according to market outcomes or other changes.

it thereafter. This coincides with a piece-wise linear approach as can be found in the US (Vanguard). However, Antolín et al. (2010) find support for the Chilean default step-wise approach. The Chilean system is comprised 5 different pension fund types varying in their risk budget. Each of the 6 pension fund administrators (AFPs) offers fund *A to E* with *A* being the riskiest and *E* the most conservative fund. The default member is assigned to fund *B* and over the course of his life-time his assets are moved to fund *C* and finally *D* as he approaches retirement age. For active members, the multiple fund model in Chile provides space for such adjustments. Surely, [allowing for flexibility for the member to adjust his investment strategy to unexpected changes in his labour income would provide better results but only under the assumption that the member is capable of taking such decisions](#). The multiple fund model in Chile seem to pose a hurdle towards active investment as multiple fund models are generally said to be less transparent and less easy to understand than single fund solutions such as target-date funds. Target-date funds group members into one fund according to their expected retirement age and then follow a deterministic life-cycle strategy (can also be a step-wise linear approach). Viceira (2012) promotes the use of deterministic life-cycle strategies as a default but warn it should not be the only option available. He suggests introducing [three different types of life-cycle \(target-date\) funds: conservative, moderate and aggressive](#) in order to leave space for risk tolerant members to exploit their market opportunities. However, at this point in time, there is not much evidence on which of the models and strategies work best. Finally, a life-cycle strategy needs to consider the optimal pay-out phase design. This can be a programmed withdrawal, an immediate life annuity or a combination of the two. With a life annuity, the member's assets are transferred to an insurance company that provides a fixed amount of pension until the member dies. A programmed withdrawal leaves the member's assets in the individual capitalization account and recalculates the pension income every year that is to be withdrawn from this balance. The main argument for a programmed withdrawal is that funds continue to be capitalized and receive profitability gains. Their greatest weakness, however, is that the amount of pension has a decreasing curve over the years, as life expectancies are exceeded the funds may even be exhausted. [Which type of pay-out modality is optimal depends on individual factors](#) such as the amount of savings; the existence or not of marriage and the partner's age; the members of the family group as potential beneficiaries of survivor's pensions; the existence or not of other income or patrimony; the state of health of the affiliate, among the most important. Financial individual advice is expensive and hence, active members need to be very well educated financially to fit the optimal pay-out phase modality into the individual life-cycle. [When designing a default life-cycle plan, the pay-out phase needs careful consideration](#). Again, for highly risk averse members (investment and longevity risks) the default plan might rather incorporate a life annuity pay-out phase design.

Final Remarks

Overall, the design of a pension system in every country needs to analyse the life-cycle characteristics of its members. This includes identifying all risks that members face especially at the lower end of the income distribution. Accordingly, an appropriate default plan needs to be designed that protects the members from pension welfare losses. Moreover, the new generations habits and preferences as well as their financial knowledge should be assessed and enhanced. Finally, pension system designers should make use of technological advancements to reach the Millennials and to enhance pension coverage and replacement rates in a changing labour market.

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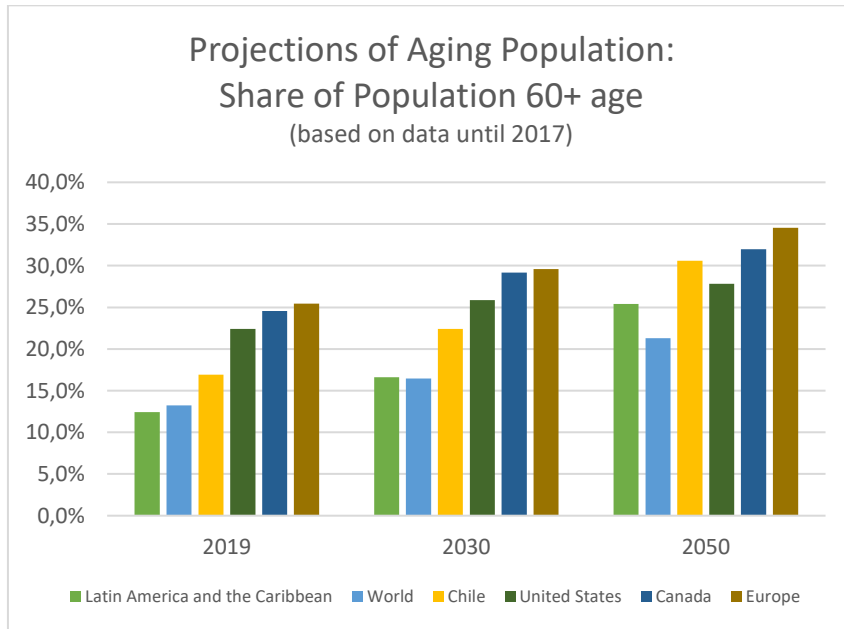
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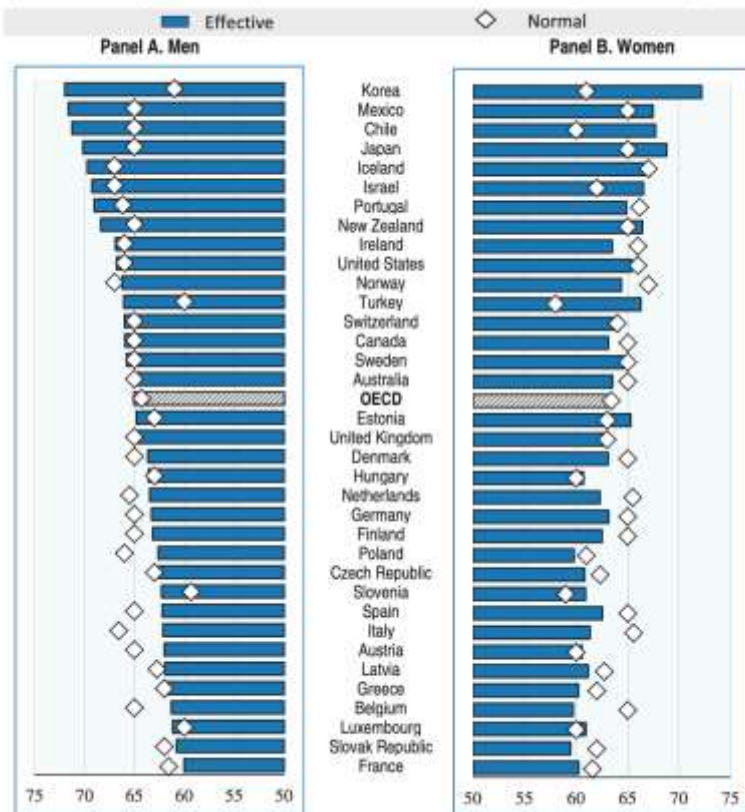
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Appendix



Source: World Bank Group (2019)

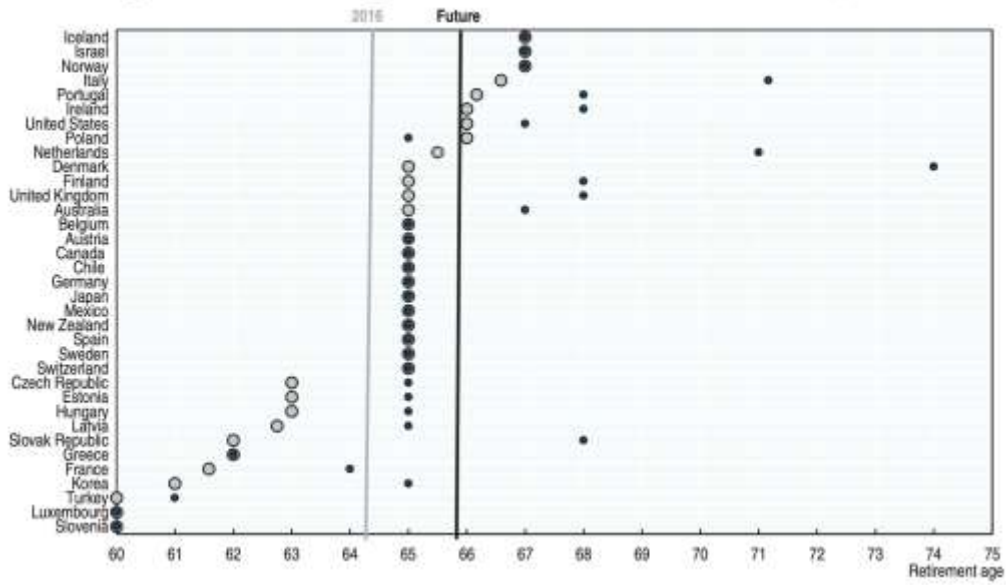
Figure 1.6. Average effective age of labour-market exit and normal pensionable age in 2016



Source: OECD estimates based on the results of national labour force surveys and the European Union Labour Force Survey.
StatLink <http://dx.doi.org/10.1787/888933633261>

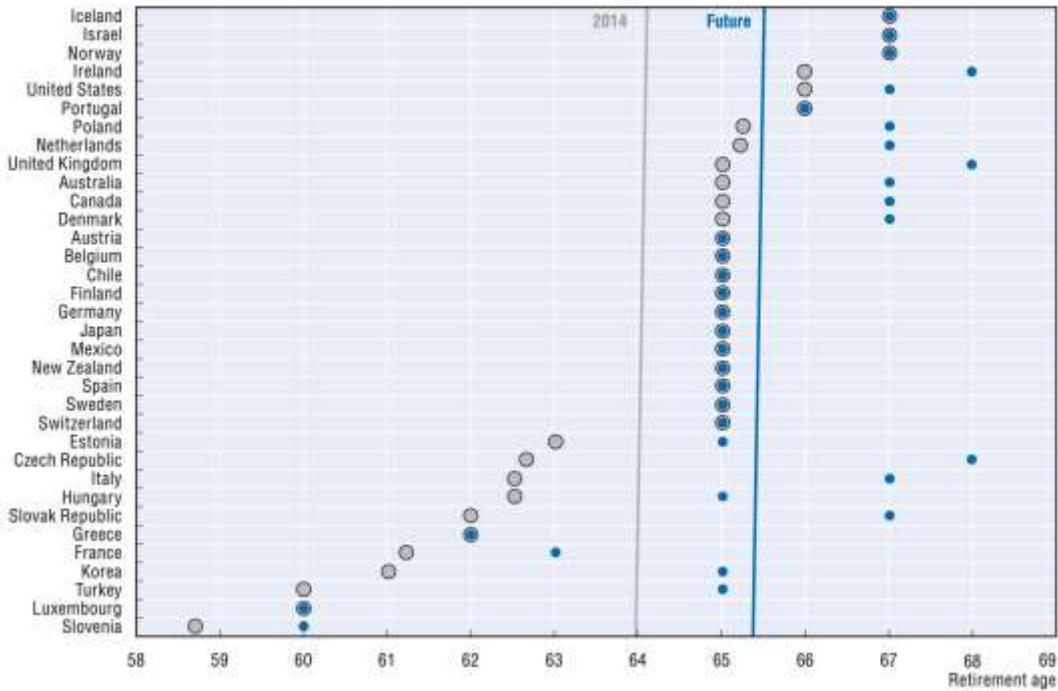
Source: OECD (2017)

Figure 1.4. Retirement ages will increase in half of OECD countries, men

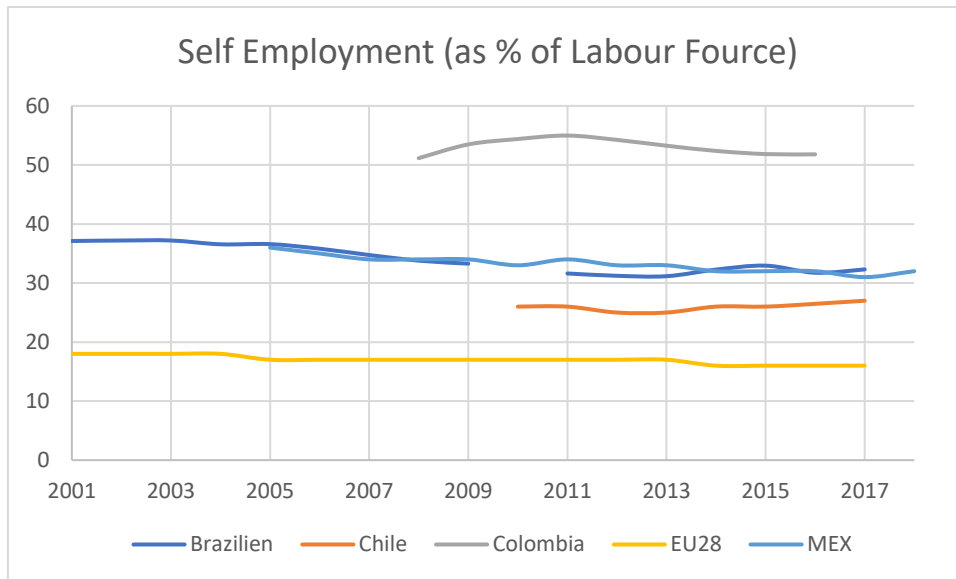


Source: OECD (2017)

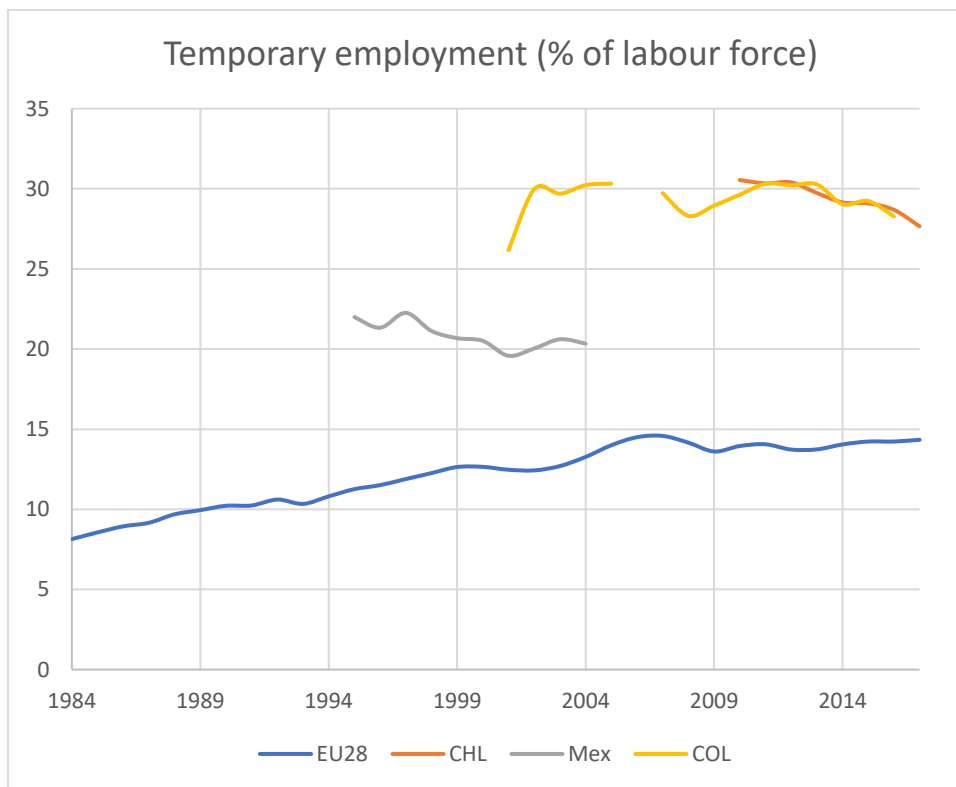
Figure 1.5. Current and future retirement ages for a man entering the labour market at age 20



Source: OECD (2015)



Source: ILO (2019)



Source: ILO (2019)