CHAPTER 9

From evidence to pension policy: What have we learned?

Camille Landais and Johannes Spinnewijn

London School of Economics and CEPR

The chapters in this eBook offer a wealth of new insights into pension reforms, driven by a recent wave of groundbreaking research. A new generation of scholars is bringing fresh perspectives and innovative methods to long-standing pension policy questions. The field has evolved significantly, combining advanced empirical tools and conceptual frameworks to better understand the complex interactions between fiscal sustainability, labour supply, and redistribution. This eBook draws on these advances to provide a clearer understanding of how pension reforms can balance these competing objectives. In this concluding chapter, we summarise the main takeaways.

A first critical contribution of this eBook is the introduction of a new framework to think about pension reforms. While the institutional context of pension policies, with all its complexities and intricacies, is hard to master, a similar concern could be raised about the dynamic, heterogeneous agent models economists have been using to provide insights, integrating labour supply, intertemporal consumption and other household decisions in combination with stochastic productivity and health processes, and allowing for heterogeneity in preferences, endowments, and so on. The new framework, building on the 'sufficient statistics' insights in the modern public finance literature, is clear in its conceptual guidance, allowing policymakers and researchers to visualise and compare different reform options effectively. It offers new clarity by linking policy reforms directly to empirical data, making it easier to connect theoretical models with real-world outcomes.

This new framework does more than visualise reforms – it improves our ability to account for both fiscal and redistributive effects. Traditionally, the focus has been on the fiscal sustainability of pension systems, especially as populations age. However, this framework stresses that pension reforms should be evaluated not just for their budgetary impacts but also for their ability to provide insurance against old-age poverty and to redistribute fairly across different socioeconomic groups. The ability to integrate both fiscal and welfare considerations is a major improvement over previous approaches and ensures a more holistic evaluation of pension policies.

NEW INSIGHTS ON FISCAL EFFECTS

A large literature has related the implicit taxes that the pension system entails to labour supply, especially around the age of retirement. Recent work has started to separate the underlying responses, whether they are to changes in financial incentives, to changes in financial resources, or driven by statutory changes. Several new insights have emerged regarding the fiscal impacts of pension reforms.

Lesson 1: Statutory rules dominate financial incentives

The evidence is clear that strengthening financial incentives – such as increasing the returns to delayed retirement – has not been particularly effective in encouraging later retirement. In contrast, statutory retirement ages, which specify when individuals can start to access pension benefits or when they become eligible for 'normal' benefits, have shown a much stronger impact on retirement behaviour. As discussed in Chapter 3, raising the statutory retirement age induces a clear delay in retirement decisions, suggesting that such policy levers are more predictable and effective than relying on financial incentives alone. However, the precise mechanisms through which statutory ages prove so effective are still unclear. Whether these statutory rules provide information, set a social norm, or become a reference point in individuals' preferences needs to be understood better.

The effectiveness of statutory ages in increasing labour supply in old age does not imply that financial incentives are irrelevant, and that pension benefits should be the same irrespective of when people retire or claim their pension.[1] Indeed, two types of financial incentives need to exist: (i) pension systems should compensate via higher benefits those individuals who contribute more (i.e., work longer); and (ii) pension systems should compensate via higher benefits those individuals who claim later (for a given amount of contributions) as they will be collecting benefits for a shorter period of time. Note that there is no particular reason for the profile of incentives to be the same along these two dimensions (retirement age and claiming age). Yet, many pension systems still do not make this distinction and inefficiently push individuals who want to access their benefits but could continue to work into early retirement.

Lesson 2: Cutting pension benefits induces later retirement

From a fiscal perspective, cutting pension benefits is the most effective intervention to reduce expenditures, also because cutting pension benefits encourages individuals to retire later. However, simply reducing resources – rather than providing steeper incentives – comes at a significant welfare cost. Reductions in benefits directly impact individuals' financial security, particularly among vulnerable groups. The question remains whether the fiscal gains achieved by pushing people to work longer outweigh the welfare losses experienced by those with reduced pensions (and whether concrete

1 Unfortunately, because almost all systems display statutory retirement ages, we still do not have a good understanding of how effective financial incentives would become in the absence of any statutory ages or of any form of guidance.

redistributive tools exist to channel these fiscal gains back for compensating these losers). This issue is particularly important when considering the potential hardships imposed on low-income individuals (see Chapter 4).

Lesson 3: Programme spillover effects matter too

Any pension reform interacts with other insurance programmes offered to individuals at old age and without employment. The spillover effects, however, seem to be largely mechanical. Workers who are unable to continue working often substitute unemployment or disability benefits for old-age pensions when statutory retirement ages are raised.

However, this substitution typically occurs only for individuals who were already enrolled in these programmes. As discussed in Chapter 7, while reforms can shift financial burdens from pension systems to disability or unemployment insurance and vice versa, they do not seem to extend or reduce the working lives of older individuals as much. It is individuals who are out of the labour market that decide whether to transition to retirement through unemployment, disability or early retirement benefits. Still, policymakers should consider the broader social insurance landscape, ensuring that reforms do not simply shift burdens between programmes without achieving the desired increase in workforce participation.

NEW INSIGHTS ON REDISTRIBUTION AND INSURANCE

The insurance and redistributive aspects of pension systems are critical to their role in providing social protection. Policymakers should carefully consider the redistributive costs of reforms that induce individuals to retire later.

Lesson 4: Cutting (*increasing*) pensions benefits for early (*late*) retirees is regressive

A key finding in Chapter 5 is that reforms that steepen pension profiles – offering stronger financial incentives for delayed retirement – carry significant redistributive costs. These reforms disproportionately affect individuals with fewer resources and worse health, as they are least able to work longer or take advantage of higher pension benefits. This creates a regressive effect, where the most vulnerable individuals bear the brunt of the reform. And vice versa, individuals who are able to work at older ages are in better health and tend to have more resources. Individuals' consumption can be a useful metric to evaluate how individuals fare through retirement. The consumption patterns suggests that individuals who retire early value pension benefits more at the margin than those retiring late.

Lesson 5: Disparities in life expectancy worsen the fairness of pension systems

Pensions try to insure and redistribute towards individuals with lower life-time earnings – either induced by early retirement or by lower income. The strong relationship between health and ability to earn also translates into strong life-expectancy gradients.

Individuals earning higher income and at later ages can expect to live longer lives and thus benefit more from pension benefits. This life expectancy gradient leads to unintentional redistribution, where higher-income individuals effectively receive more from the system than their lower-income counterparts (see Chapter 6).

To be clear, the payment of pension benefits as an annuity provides essential insurance against longevity risk. As a result, individuals who end up living longer will have received more benefits relative to those who happen to live shorter lives. There is clear value to this 'ex-post' insurance, and we do not propose to change the logic of the annuity system. But given the large disparities in longevity that are predictable 'ex-ante', we should wonder whether we can ask the same contributions from individuals who expect to live a shorter life. An appealing and transparent fairness criterion is that these individuals should have a similar ability to enjoy retirement at old age. While they can decide to retire later, they should be allowed to retire earlier with expected life-time resources that are proportional to their contributions. In other words, the expected ratio of pension benefits to contributions should arguably be equalised across groups with different life expectancy. This is the metric proposed in Chapter 6. Note that this 'bang for the buck' criterion that individuals should get the same total pension benefits per euro of contribution is much more limiting than the broader welfare view that we apply in our general framework in Chapter 5, where we also consider the insurance and redistributive value of pensions.[2] But adopting our broader welfare view one would also make a case for compensating individuals with shorter life expectancies.

Lesson 6: Well-targeted measures can provide fiscal space and redistribution

In Chapter 5, we identified reforms that can induce later retirement and entail desirable redistribution. In particular, on average, individuals retiring at the early retirement age (i.e., in their early 60s in most countries) are more resourceful than individuals retiring at the normal retirement age (i.e., in their late 60s).[3] Hence, we can steepen incentives between these two ages. This will have positive fiscal externalities, while offering desirable redistribution. Similarly, individuals with longer careers at any given retirement age tend to have fewer household resources and could thus be compensated without distorting their labour supply. Finally, individuals with fewer assets have a harder time to smooth their consumption into retirement. Generous minimum pensions with an asset test could effectively provide these individuals with valuable protections.

In identifying these opportunities, we must recognise the roles of health and gender as key markers for ensuring that pension systems are equitable. Targeted measures are necessary to protect individuals with lower lifetime earnings and worse health. Disability benefits can provide complementary insurance by ensuring that individuals leaving the

2 This 'bang for the buck' criterion is often invoked to justify increasing benefits for later retirement. Under this fairness view, compensating later retirement and compensating shorter life expectancies is equivalent, and should be equally supported.

3 This fact results from the wealth effect on labour supply: leisure being a normal good, wealthier individuals demand more. They tend to retire earlier, as they can afford it.

labour market early due to health shocks or disability continue to have some income. However, the challenge is that disability insurance only operates up to the retirement age, meaning that pension systems must be designed to allow for the accumulation of pension rights even during periods when individuals are receiving disability benefits. Reforms must also account for gender disparities, ensuring that women, who often have lower lifetime earnings but tend to live longer, are not disproportionately disadvantaged.

FURTHER IMPLICATIONS AND DISCUSSION

The fiscal sustainability of our pension systems is under pressure. All prognoses suggest that we cannot afford to wait, and have to act. This is also the case in the United States, as detailed in Chapter 8. The insights presented in this eBook offer a comprehensive understanding of pension reforms, balancing fiscal sustainability with insurance and redistribution effects.

Still, there are several additional areas where further research and policy attention are needed. An essential question is how pension benefits are valued and which beneficiaries value them most. New methods have been developed in the social insurance literature where individuals cannot reveal how much they value the social insurance through prices that they are willing to pay or not (e.g., Chetty, 2008; Landais and Spinnewijn, 2021). If people are very responsive to a reduction in resources, for example in their decision to retire, so-called income effects are likely large. However, if they do not respond much to incentives to retire later, so-called substitution effects are likely small. The two combined suggests that cuts in pension benefits come at a large cost and this is what the evidence, across different studies, seems to suggest. Similarly, Kolsrud et al. (2024) find that the marginal propensity to consume is particularly high for individuals retiring early or with low wealth, indicating that pension transfers are especially valuable for these group. This suggests that any reductions in benefits disproportionately harm low-wealth retirees or those forced to retire early. Evaluating how these responses relate to the value of pension transfers is a crucial area for future research.

As mentioned, another important consideration that is often overlooked is the distinction between retiring and claiming benefits and the separate role pension systems can play on either dimension. Central in this eBook is the idea of inducing individuals to work longer and of balancing this with the redistributive or insurance role pension systems play – a traditional trade-off between efficiency and equity. A related, but distinct question is whether to help smoothing consumption into retirement and how to handle the need for liquidity before retiring – a more nuanced trade-off between commitment and flexibility.

Finally, as policymakers think about how to handle disparities in life expectancy, we should also think about how to extend healthy life expectancy. Ensuring that people can not only live longer but also remain healthy and capable of working at later ages is vital to making retirement reforms that encourage delayed retirement both sustainable and humane.

Future pension reforms can adopt the new framework proposed here, ensuring that fiscal, insurance, and redistributive considerations are all addressed in tandem. This holistic approach will be crucial for designing pension systems that are both financially sound and socially fair in the decades to come.

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ABOUT THE AUTHORS

Camille Landais is a Professor of Economics, Director of the Suntory and Toyota International Centres for Economics and Related Disciplines (STICERD), and Co-Director of the Hub For Equal Representation in the Economy (H.E.R) at the London School of Economics. He is also the President-Delegue at the French Council of Economic Advisers (CAE). He received his PhD from the Paris School of Economics and was a Research Fellow at Stanford University (Stanford Institute for Economic Policy Research). His research interests cover topics such as taxation, social insurance, and pro-social behaviours.

Johannes Spinnewijn is Professor in Economics at the London School of Economics. His research focuses on various topics in public economics, including the design of social insurance and healthcare and how this is affected by behavioral biases. Johannes is Director of the Public Economics programme at CEPR and Research Fellow at the Institute for Fiscal Studies. He has been awarded the British Academy's Wiley Prize for outstanding early career achievement in research. Prior to joining LSE, he completed his PhD at the Massachusetts Institute of Technology.