

International Social Security Review

ISSN 0020-871X

- Prompts cause people to update their preference of when to take retirement and increase confidence in choice
- Understanding clerical decisions in granting social assistance: Insights from national social security officials in Brazil
- Maternity, motherhood and access to contributory pensions: The case of Uruguay
- Developing long-term care insurance in China: A review of structure, impact and future directions
- Racial and ethnic inequalities in pension insurance coverage in Colombia



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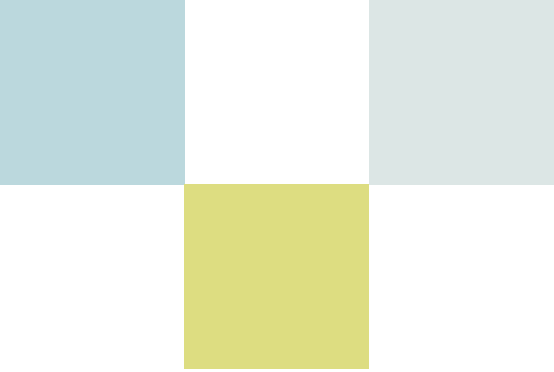
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INTERNATIONAL SOCIAL SECURITY REVIEW, (Print ISSN: 0020-871X; Online ISSN: 1468-246X), is published quarterly. Postmaster: Send all address changes to *International Social Security Review*, Wiley Periodicals LLC, C/O The Sheridan Press, PO Box 465, Hanover, PA 17331 USA.

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Prompts cause people to update their preference of when to take retirement and increase confidence in choice

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Abstract The decision concerning when to take retirement involves many uncertain factors. When confronted with such high stakes and complex decisions, people might defer to defaults or norms instead of asking themselves which option best suits their own circumstances. We present a survey experiment to test whether prompting people to reflect on their personal situation, such as debt, health and skills alters a) when they choose to claim their pension and b) confidence in that choice. We asked 2,197 Estonians aged 50–64, if they were to make the decision, would they take an early retirement, a flexible pension, or continue to work until retirement age? The prompt caused a 50.9 per cent increase in the proportion of participants choosing to continue working – from 23.4 per cent in the control condition to 35.3 per cent in the prompted groups. Although we study retirement choices in Estonia, our results have a general implication – our data suggest that people take early retirement without first asking themselves fundamental questions about whether retiring at that age is best for them. A second implication is that a simple and scalable prompt can cause a shift in preference and increase

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

people's confidence in their choice, therefore serving as a signpost towards a considered retirement decision.

Keywords retirement, early retirement, flexible retirement, benefit administration, survey, attitude, Estonia

Introduction

A complex and important choice that many people face is when to retire. There are large consequences to this decision. If the person decides to retire earlier, they risk exhausting their pension wealth and finding themselves in penury. The person's decision to retire also has implications for the state pension system; it can switch the person from being a net contributor to the system to being a net recipient. Given its influence on individual well-being (Barrett and Kecmanovic, 2013; Horner, 2014; Wise, 2009) and national accounts (Chybalski, 2016; Marcinkiewicz and Chybalski, 2014), the question of how people decide when to retire is important.

The current research contributes to the literature on the decision of when to retire (for a review, see Fisher, Chaffee and Sonnega, 2016) and tests a behaviourally informed tool for signposting towards considered choices. In economics, most of that literature has focused on the role of health and the person's financial situation (Bazzoli, 1985; Davey, 2008; Ruzik-Sierdzińska, 2018) or on the incentives and benefits that influence retiring early (e.g. Dolls and Krolage, 2019; Hakola and Uusitalo, 2005; Hanel, 2012). These studies are observational, exploiting variation at the individual level, across space or over time. The broad patterns they depict are consistent with people coming to a retirement decision by asking themselves "*is it in my best interest to take early retirement?*". That said, behaviourally informed interventions have shown promising results in influencing pension decisions (Beshears et al., 2006; Madrian and Shea, 2001; Thaler and Benartzi, 2004). For example, messages showing the financial benefits of retiring later or the costs of retiring early can increase the age when a person prefers to retire (Greenberg et al., 2023; Liebman and Luttmer, 2015). We follow suit and adopt the behavioural view.

Our aim is to assess whether retirement choice and confidence in that choice change when presented with a prompt. We experimentally tested the effect of the prompt against a control condition where respondents make their choice without seeing any prompt. The sample comprises 2,197 people who are approaching retirement age in Estonia. Estonia is chosen because addressing informed

retirement decision making can be useful in mitigating the possible negative consequences for pensioners' well-being of having followed default or ill-informed retirement decisions. The country has one of the highest shares of working people aged 65+ in Europe and one of the highest relative poverty rates for pensioners among the Member countries of the Organisation for Economic Co-operation and Development (OECD).¹ In addition, the Estonian Social Security Board is in the process of implementing a policy change regarding options for early and flexible retirement, which presents a timely avenue for research.

The prompt investigated in this study consists of eight (or nine for two of the treatment groups) questions that a person would be expected to consider before their retirement. The prompting intervention was not intended to “nudge” the retirement decision one way or another, as is often the case with nudges (Thaler and Sunstein, 2009). It was designed only to call to mind information that is relevant for the decision at hand, more akin to informative-educational nudges (Sunstein, 2015). Some scholars classify this type of intervention as a “boost” (Hertwig and Grüne-Yanoff, 2017; Wang-Ly et al., 2022), others as a “signpost” (Camilleri, Cam and Hoffmann, 2019).

We find that our prompt caused a substantial shift towards opting to continue working. The magnitude of the effect is impressive – relative to respondents in the control condition, the proportion of respondents who chose to continue working increased by 50.85 per cent in the prompting conditions, from 23.4 per cent in the control group to 35.3 per cent in the prompted groups. The effect of the prompt was very similar regardless of two variations in its design: the order in which it listed the early retirement and flexible pension options; and whether it offered a link to a pension calculator or not. This stability of the results across these variations confirms that the prompting effect is robust.

What is striking is that this result holds even when we restrict our sample to workers who are on the cusp of retirement. The treatment effect remains similar when we restrict the sample to those who are already entitled to claim pension income (i.e. those aged 60+), or when we only consider employed individuals instead of the full sample. In short, our prompts had a substantial effect on the very people who we would expect to have given most thought to the question “*when should I take retirement?*”.

A second dependent measure in our study asked respondents to rate how confident they were in their choice. Our prompt left participants at least as confident in their choice as those in the control condition. In fact, two of our four treatments caused confidence in choice to increase relative to the control group. This result implies that participants considered our prompt to be a useful guide in their decision making.

1. See [OECD Data](#) public web portal.

Taken together, these results imply that our prompt informs preferences. In our view, this is the key finding of our paper. The fact that the prompt had a large effect on workers who are on the cusp of retirement suggests that these workers came into our survey without having come to an informed decision on the question “*when should I take retirement?*”. The fact that our prompt caused these participants to favour continuing work suggests that, in the absence of our prompt, these participants would have been biased towards taking early retirement. This result echoes results from other national samples that suggest that people drift into early retirement even when it is not in their own best interest. We conclude that “sleepwalking” describes retirement decision making in Estonia and in other countries too.

The next section contextualizes our research in the relevant literature and describes Estonian pension policy. This is followed by the empirical data. Lastly, we consider the implications of our study.

Literature review

Active and passive retirement decisions

Retirement decisions are complex and life-changing – many parameters relevant to retirement outcomes are characterized by risk and uncertainty. In view of that complexity, enterprises, academics and policy makers have sought to design user-friendly “choice architecture”. Choice architecture is premised on the insight that “people’s preferences [...] can differ across ostensibly equivalent choice situations” (Camilleri and Larrick, 2015, p. 2). For example, defaults are extremely influential in retirement decisions (Dobrescu et al., 2018) even among knowledgeable individuals (Riitsalu, 2018).

Early examples that applied choice architecture to retirement decisions adopted a one-size-fits-all approach and have been criticized for reducing decision makers’ autonomy (Lades and Delaney, 2022). As an example, to demonstrate the “autonomy critique”, automatic enrolment into a pension scheme (Madrian and Shea, 2001) can be argued to remove agency from the individual who finds themselves automatically enrolled. The one-size-fits-all critique is exemplified by choice simplification, which “collapses a multidimensional problem into a binary choice between the status quo and the pre-selected alternative” (Beshears et al., 2013, p. 130). Yet individual contexts are more nuanced, and the same solution may not benefit everyone.

Cognizant of these critiques, some researchers have removed defaults and instead required people to make an “active choice” (Carroll et al., 2009). Active choice addresses the autonomy critique, but it leaves consumers with no

guidance on *how* to come to a decision. Others have proposed “enhanced active choice”, which highlights the benefits of a given option (e.g. Keller et al., 2011). Given that this seeks to nudge choice towards a certain outcome, however, enhanced active choice suffers from the one-size-fits-all critique. For example, it has been found that messages highlighting the financial benefits of retiring later or the costs of retiring early increase the age when individuals prefer to retire (Greenberg et al., 2023; Johnson et al., 2016; Knoll et al., 2015; Liebman and Luttmer, 2015). Yet, some people may have good reasons for retiring early unrelated to financial concerns, so such messages might persuade them to make a suboptimal choice.

The current research seeks to avoid endorsing any particular outcome but to instead provide choice architecture that is “autonomy enhancing” (Binder and Lades, 2015). These autonomy-enhancing interventions are called “boosts” (Hertwig and Grüne-Yanoff, 2017) or “signposts” (Camilleri, Cam and Hoffmann, 2019). Whereas a nudge sidesteps a person’s biases or blind spots to deliver an outcome that the choice architect judges to be in that person’s best interest, autonomy-enhancing choice architecture aims to provide tools that help the person address their biases or blind spots. For example, changing default settings is a nudge whereas asking people questions that filter out unsuitable choices would be autonomy enhancing.

Bajtelsmit and Coats (2023) show one example of autonomy-enhancing choice architecture applied to retirement decision making by experimentally testing prompts that guide participants to reflect on their financial goals. Even though the prompts provided no novel information, they caused participants to save more.

A separate motivation for testing the effect of prompts is that people seem to neglect to ask themselves basic questions before taking retirement. Gruber, Kanninen and Ravaska (2022) and Lalive, Magesan and Staubli (2023) show that the age at which people retired was sensitive to an arbitrary change to the labelling of age of “normal” retirement. Independent of any impact on the financial costs and benefits of retiring, the relabelling induced many people to take retirement at the age that now happened to be labelled as “normal”. These labelling effects are large and real – they are documented in administrative data from the populations of Finland and Switzerland respectively (Gruber, Kanninen and Ravaska, 2022; Lalive, Magesan and Staubli, 2023). In the Finnish sample it was also shown that many people regretted taking early retirement – they reversed their decision and re-entered the workforce (Gruber, Kanninen and Ravaska, 2022). In short, there is evidence that people retire without considering their own personal costs and benefits of doing so.

Prompts for signposting retirement decisions

The theory that informs the current research is that people tend to choose early retirement without having thought through the costs and benefits of retiring early. If that is so, then a simple prompt to consider those costs and benefits could induce changes in choice. Our prompt invited participants to consider various issues. Building on previous research, it includes factors related to one's own health, ability to work and financial situation (Bazzoli, 1985; Davey, 2008; Dolls and Krolage, 2019; Hakola and Uusitalo, 2005; Hanel, 2012; Ruzik-Sierdzińska, 2018). This leads us to our first hypothesis:

- H1: A prompt of retirement considerations influences individual retirement timing preferences.

Evidence from experiments that apply query theory to retirement decision making (Johnson et al., 2016) suggests that respondents who are shown the early retirement option before the flexible pension option are more likely to choose the early retirement option, whereas those shown the options in reverse order are more likely to choose the flexible pension option (Knoll et al., 2015). Therefore, our second hypothesis addresses the ordering effect found in previous research:

- H2a: The ordering of items within the retirement prompt of considerations influences individual retirement timing preferences.

As an additional consideration, studies have documented the influence of retirement calculators and future projections, which are increasingly common tools in pension communication (Brüggen, Post and Schmitz, 2019; Debets et al., 2018) on retirement decisions (Goda, Manchester and Sojourner, 2014; Goda et al., 2023; Lunn, 2023). However, pension timing decision seems relatively inelastic to financial incentives (Glenzer, Michaud and Staubli, 2023) and experiments with pension calculators have provided mixed results (McGowan, Lunn and Robertson, 2018; Olckers, 2021). This warrants further study, and we form the following hypothesis:

- H2b: The inclusion of a link to a pension calculator within the retirement prompt of considerations influences individual retirement timing preferences.

Finally, it is important to consider confidence-in-choice. If a prompt is helpful, then it should make a participant more confident that they have given due consideration to all dimensions of a problem. We follow the literature that asks survey respondents for their confidence in their choice (e.g. Agnew and Szykman, 2005; Agnew and Szykman, 2010; De Martino et al., 2013; Enke and Graeber, 2023). Self-reported confidence measures have been demonstrated to predict real-world choice behaviour in experimental settings (Soll and Mannes, 2011) and in real portfolio allocations (Giglio et al., 2021). We predict

that our prompt will cause the respondent to feel more confident about their chosen outcome. As such, we arrive at the last hypothesis:

- H3: Providing a prompt of retirement considerations influences confidence-in-choice for retirement timing decision.

Policy background of the current study

At the time of writing, the Estonian pension system comprises three pillars: i) a pay-as-you-go state pension insurance scheme (with a national minimum pension for those eligible persons who do meet the qualifying conditions), ii) a mandatory funded pension scheme for persons born in 1983 or after but with the option to opt out before retirement age, and iii) a voluntary supplementary funded pension scheme (Social Insurance Board, 2024; Piirits and Vörk, 2019).² The second and third pillars have become more similar after a recent pension reform in 2021: both permit withdrawal of individual accumulated pension savings in any year before the retirement age, although 20 per cent is deducted as income tax if withdrawn before retirement age (Aidukaite, Hort and Kuhnle, 2021). It is possible to choose to have an individual pension investment account (PIK), managed by registered private fund managers, to invest the individual savings held by both the second and third pension pillars (Piirits and Vörk, 2019), and there is evidence that many people do not compare the conditions of all pension funds available before making the decision into which to enrol (Riitsalu, 2018). In the current study, we focus solely on the first pillar state pension insurance scheme.

The context for our study is a policy change that is being implemented in Estonia. The reform has introduced a new flexible state pension, allowing people to take some state pension income while still working. Until 2021, there were only two options – either, to take early retirement or work until the retirement age. Under the previous regulation, a person taking early retirement could not work if they received pension benefits. The introduction of the flexible pension allows people in Estonia to claim some pension income while winding down their careers and progressively exiting the labour force. Though this option is likely to be attractive for some people, the introduction of the flexible pension as an additional option to an already complex decision process might further complicate retirement decision making.

2. More information on the Estonian pension system is available on the public web portal of [the Republic of Estonia](#).

Our study concerns a choice between three retirement options (Social Insurance Board, 2024):³

- Early retirement pension – this current option will no longer be possible to choose from 2026. It is open to those who have less than three years until reaching the retirement age (age 65), but the pension amount is reduced by 0.4 per cent for each month the pension is taken before the retirement age, and paid work must cease on receipt of the pension.
- Flexible old-age pension – this option became available in 2021 and will replace the early retirement pension option in 2026. It allows the receipt of income from work while claiming pension benefits.
- Continue working until retirement age (age 65) with no receipt of pension income before that date.

Currently in Estonia, those who are approaching their early retirement age (ages 60–62) can opt to retire early. There are two options for doing so: i) early retirement, which removes the option to work, including in entrepreneurial activities, or ii) flexible retirement, which allows for work. For the latter, the person's income is derived from their pension and from income from work (Social Insurance Board, 2024). If a person who opts for early retirement decides to return to work before their official retirement age, their income from the pension is suspended.

According to the Ministry of Finance and Ministry of Social Affairs (Lillelaid and Selgis, 2022) in 2021, 8,082 people retired in Estonia. Of these, 3,685 (45.6 per cent) opted for early retirement and 1,722 (46.7 per cent) of these early retirees chose a flexible retirement scheme. Out of those who chose a flexible pension scheme, 684 did so within five years of the retirement age.

For the others, only 358 retirees (9.7 per cent) retired early without access to preferential conditions, while 751 retirees (20.4 per cent) received early retirement due to having a disabled child or three children or more, and 252 retirees (6.8 per cent) were previously employed in potentially hazardous professions (e.g. police force). The remaining 16.4 per cent of early retirees comprise special cases, such as those receiving pensions for repressed populations (people who have experienced serious repression, such as during the Second World War), or retiring ex-members of parliament and other exceptions, as well as persons who have not worked the required minimum amount of 15 years in Estonia to be eligible for the first-pillar social insurance pension but who are entitled to the national minimum pension.

3. Technically, there is also a fourth option: the receipt of an old-age pension under favourable conditions if the covered person has a disabled child or three children or more. There are also certain professions that are granted early retirement, such as the police force (Social Insurance Board, 2024). These special cases apply to a very limited subset of the population and are not addressed by the current study.

The value of the first pillar monthly pension varies by the individual's year and month of birth, service period length, insurance component and, for early retirement, by how much earlier than the official retirement age a person decides to opt to receive the state pension (Social Insurance Board, 2024). The state pension is reduced for each month the person retires before their retirement age date and increases for each month a person delays retirement after their normal retirement age. On average, an early retiree can expect to receive a reduction in their first pillar state pension of between 30.06 per cent (when retiring five years before the state retirement age) and 7.13 per cent (when retiring one year earlier), and an increase of 7.85 per cent (when delaying retirement by one year) up to an increase of 48.76 per cent (when retiring five years after the retirement age).⁴ In 2021, the average state pension was 553 euros (EUR) per month, which translates into a possible spread of EUR 389 to EUR 823 per month, depending on when the person decides to retire.

Materials and methods

Participants

To gain insight on how retirement intentions are formed, we employ an online survey experiment (see Appendix A.1. for details).⁵ Online survey experiments include features from both surveys and experiments, so that slightly different variations are presented to individuals (Stantcheva, 2022). In our experiment, we ask people to choose from the three options that were available to Estonians aged 60+ at the time of the survey: i) a flexible pension that allows them to continue working; ii) early retirement which requires the complete cessation of paid work; or iii) continue to work without claiming any state pension.

We recruited participants through Facebook advertisements, and they were randomly assigned into four treatment groups (A. Earlyfirst_nocalc; B. Flexfirst_nocalc; C. Earlyfirst_calc; and D. Flexfirst_calc) and one control group (see Appendix A.2 for details on recruitment).⁶ The final sample comprised of

4. The retirement age in Estonia is generally age 65, but it varies based on the year of birth. For example, individuals born in 1958 can retire nine months earlier, those born in 1959 can retire six months earlier, and those born in 1960 can retire three months earlier.

5. This article is supplemented by an Appendix (developed by the authors and made available to readers). See Supporting Information, A.1.

6. This article is supplemented by an Appendix (developed by the authors and made available to readers). See Supporting Information, A.2.

2,193 individuals in Estonia, with the sample limited to those aged 50–64. Sample characteristics are described in Table 1. We compare the observable characteristics of each treatment group against the control group separately via independent samples t-tests and conclude that the sample is randomized between groups.⁷

Procedure and materials

In the four treatment groups, the participants were exposed to a prompt to think about factors relevant to deciding when and how to retire (see Table 2 for the text of the prompt for Treatment condition A; more precise details on the procedure are provided in Appendix A.2). The prompt included a brief explanation of the alternatives for retirement, early retirement or flexible retirement, and the order of those options varied for different treatment groups, as noted in the respective group names. Additionally, participants in groups Earlyfirst_calc and Flexfirst_calc were provided a link to the Estonian state pension calculator.⁸ The control group were not shown any information to consider nor were they offered a link to the calculator.

Participants then proceeded to the question that asked them to indicate their preference as to whether to a) continue working, b) continue working and claim a flexible pension, or c) stop working and claim the pension. After indicating which retirement option they would choose, they were asked about their confidence in that choice on a 10-point scale, as similarly done by Soll and Mannes (2011), which we later analyse with OLS regressions.

We coded preference as a binary variable: 1 for continuing to work and 0 for preferring any of the two early retirement options (alternative dependent

7. While Table 1 suggests that randomization delivered balance across the five survey conditions, there are a few points worth highlighting. The initial independent sample t-test for part-time workers in treatment Earlyfirst_calc compared to control was significant. Given the large number of comparisons reported in Table 1, we conducted a Bonferroni correction. It delivered a p-value of .20. As such, we conclude that the initial result was likely a false positive. We adopted the same procedure regarding people who did not disclose their age or their employment status, with the Bonferroni correction showing no statistically significant difference between treatment group Earlyfirst_nocalc and the control group ($p > .15$ both for undisclosed employment status and age). Still, to rule out that differences in respondent characteristics explain our results, each hypothesis test below reports the results from a model that controls for observables (Model 3 in each table). In addition, we check for sample balance across all experiment groups with Chi-Square tests (and ANOVA for age as a continuous variable). As none of the test yield statistically significant results, we conclude that the sample is well balanced across treatment groups.

8. The Estonian pension calculator can be accessed [here](#).

Using prompts to signpost considered retirement decisions

Table 1. Summary statistics

	Treatment A	Treatment B	Treatment C	Treatment D	Control E	Total
Ordering in the prompt	early pension option first	flexible pension option first	early pension option first	flexible pension option first	NA	NA
Inclusion of the pension calculator	-	-	+	+	NA	NA
n	489	557	239	245	663	2,193
Employment status (p values)						
No work, no pension (.29)	6.3% (.20)	6.5% (.25)	5.0% (.11)	4.9% (.09)	8.2%	6.6%
Pension + work (.77)	6.3% (.75)	6.6% (.52)	7.9% (.22)	5.7% (.97)	5.7%	6.3%
Retired early (.96)	3.7% (.49)	3.2% (.72)	3.4% (.70)	2.9% (.98)	2.9%	3.2%
Working part time (.08)	10.8% (.10)	14.0% (.91)	7.9% (.02*)	11.8% (.43)	13.7%	12.3%
Working full time (.16)	71.3% (.13)	65.9% (.92)	71.2% (.07)	71.4% (.11)	65.3%	68.1%
Not disclosed (.16)	1.6% (.01*)	3.8% (.40)	4.6% (.81)	3.3% (.51)	4.2%	3.5%
Age (p)						
Mean age (.60)	56.17 (.84)	56.29 (.75)	56.67 (.15)	56.37 (.61)	56.22	56.29
50-54 (.26)	40.1% (.08)	34.6% (.90)	33.1% (.59)	37.1% (.55)	35.1%	36.1%
55-59 (.78)	33.8% (.26)	36.4% (.86)	33.9% (.40)	35.9% (.77)	35.9%	35.7%
60-64 (.65)	24.3% (.75)	24.6% (.66)	28.5% (.13)	23.7% (.96)	23.5%	24.5%
Not disclosed (.13)	1.8% (.01*)	4.4% (.86)	4.5% (.96)	3.3% (.40)	4.5%	3.7%

Notes: * $p < 0.05$; ** $p < 0.01$. The table shows the proportions of respondents within the specified treatment group. Within cell brackets are p -values calculated from independent samples two-sided t -tests comparing the specified treatment group against the control group E. The p values in the first column indicate Chi-Square tests to check for randomization across all groups, mean age test is ANOVA. Group sizes are different due to the delay in deploying the C and D group surveys. User IP addresses were blocked from accessing the survey multiple times.

Source: Authors' elaboration.

variables are detailed in the Supporting Information, Appendix A.3).⁹ We coded treatments as dummy variables, and for control variables we used self-reported employment status as a categorical variable (with the options of early retirement, working part time, working full time, working and receiving a pension at the same time, or not working nor receiving a pension), and age as a continuous variable. We report treatment effects within the logistic regression models as both coefficients and odds-ratios, with a p value significance level of 5 per cent.

9. This article is supplemented by an Appendix (developed by the authors and made available to readers). See Supporting Information, A.3.

Table 2. *Prompt for treatment group A*

Please read and think about the following issues, you do not need to select any of them

When approaching retirement age, it is worth considering if, when and how to stop earning income from working. Before making a decision, the following things could be considered:

- Do I want to work at least until retirement age (65)?

- Or would I prefer early retirement to stop working and get only pension?

- Or would I prefer to take earlier flexible retirement – Reduce the workload and get pensioned already at the same time?

- Do I know which of these options is financially more beneficial for me?

- Do I have debt or other obligations that I could not handle without working?

- Does my health allow me to work in retirement age?

- Do my skills enable me to work in retirement age?

- Who could give me advice before I make a decision?

Notes: Translated from Estonian. This is the formatted text treatment group A saw after agreeing to take part in the study.

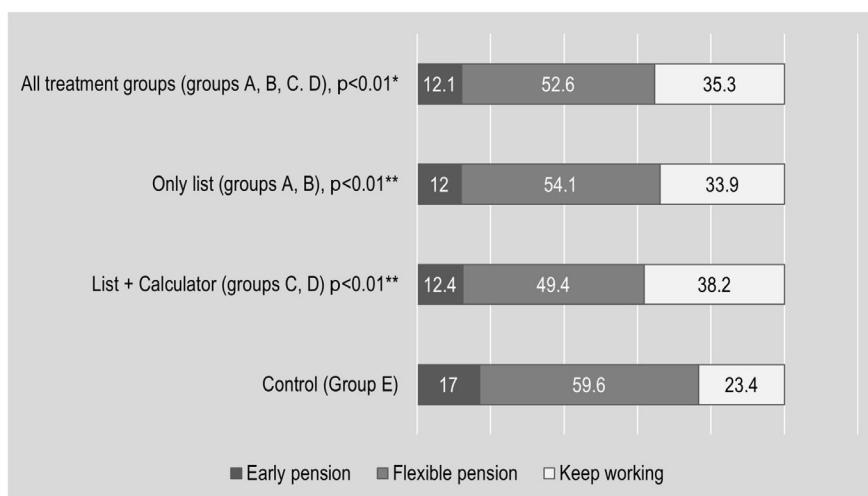
Source: Authors' elaboration.

Results

Effects of the prompt

The prompt had a substantial effect on early retirement intentions (see Figure 1). The preference to continue working (23.4 per cent) is lowest in the control group who did not receive a prompt. It is higher in all treatment groups, the pooled mean is 35.3 per cent across all treatment groups, a proportional increase of 50.9 per cent. Participants in the control group were more likely than treatment group participants to prefer a flexible pension (59.6 per cent vs. 52.6 per cent) or an early pension (17.0 per cent vs. 12.1 per cent). In what follows, we take as our dependent variable whether the respondent chose to continue working. Our conclusions are unchanged if we take alternative binary dependent variables, whether the respondent chose early retirement or whether they chose the flexible pension (see Supporting Information, Appendix A.3).

Model 1 of Table 3 presents a binary logistic regression of continuing to work. The independent variable is whether the respondent saw a prompt. Relative to the control group, those who saw a prompt were significantly more likely to prefer to continue working, as indicated by the positive coefficient .58 ($p < .01$). Model 2 compares each different treatment separately against the control group. We can note that the effect size varies between 63 per cent increased likelihood for

Figure 1. *Effects of the intervention (% of group)*

Source: Authors' elaboration.

treatment (Flexfirst_nocalc) to 101 per cent increased likelihood in choosing the continue to work option for treatment group (Flexfirst_calc). All of the treatments are statistically significant compared to the control group.

In Model 3, we estimate treatment effects controlling for age (continuous variable) and employment status (for which the basis is working full time). As would be expected given randomization, the treatment effects remain remarkably similar with the controls applied. Again, each treatment substantially increases preference to continue working. As such, we found evidence to support our first hypothesis, arguing that the prompt influences retirement timing preferences.

Ordering and calculator effects

We now test the marginal effects of adding the pension calculator link and of changing the order of the items on the preference to continue working. The results are described in Table 4. Models 1 and 2 assess the effect of providing a link to a pension calculator. In this case, the basis for the logistic regression is not having a calculator presented (Earlyfirst_nocalc and Flexfirst_nocalc). While all treatment groups consistently increase the likelihood of continuing to work, as shown in Table 3, we did not detect any difference between groups when the calculator was present relative to when it was not. This finding is unchanged when we control for covariates in Model 2.

Table 3. *Treatment effects (binary logistic regressions of continuing to work)*

Treatment type	Coefficient (standard error) [Odds-ratio]		
	Model 1	Model 2	Model 3
Any treatment (all treatment conditions pooled)	.58** (0.11) [1.79]		
Treatment A		.56** (0.13) [1.75]	.57** (0.14) [1.77]
Treatment B		.49** (0.13) [1.63]	.50** (0.13) [1.64]
Treatment C		.68** (0.16) [1.98]	.69** (0.17) [2.00]
Treatment D		.73** (0.16) [2.01]	.71** (0.17) [2.03]
Age			.08** (0.01) [1.09]
Employment status: no work, no pension			-.94** (0.22) [0.39]
Employment status: retired early			-1.20** (0.32) [0.30]
Employment status: flexible pension			-1.60** (0.26) [0.20]
Employment status: working part time			-.57** (0.15) [0.57]
R _N ²	.02	.02	.08
Number of observations	2,193	2,193	2,110

Notes: * $p < 0.05$; ** $p < 0.01$. Binary logistic regression of choosing to continue working. Model 1 has all treatment conditions pooled together and compared to the control group. Model 2 controls for survey condition only, with the control group as the base category. Model 3 additionally controls for participant characteristics.

Source: Authors' elaboration.

The second treatment type is related to ordering effects, with groups Earlyfirst_nocalc and Earlyfirst_calc seeing the early retirement option first and groups Flexfirst_nocalc and Flexfirst_calc receiving the flexible pension offer first. In the logistic regressions the base category is the treatment in which the early retirement option is shown first. Our analysis could not detect a statistically significant difference between these two groups with different order of presenting the options. Applying controls in Model 4 did not have a significant impact on this.

Therefore, neither the ordering of the early retirement options nor the presence of the retirement calculator link influences preference for continuing to work in our sample (see Supporting Information, Appendix A.4 for a more detailed

Table 4. Pension calculator and ordering effects (binary logistic regressions of continuing to work)

Treatment type	Coefficient (standard error) [Odds-ratio]			
	Model 1	Model 2	Model 3	Model 4
Treatment E (control)	-.52** (0.11) [0.59]	-.53** (0.12) [0.59]	-.60** (0.12) [0.55]	-.61** (0.13) [0.54]
Calculator effect (treatment groups C and D compared to treatment groups A and B)	.19 (0.11) [1.20]	.17 (0.12) [1.18]		
Ordering effect (treatment groups B and D compared to treatment groups A and C)			-.04 (0.11) [0.97]	-.05 (0.11) [0.96]
Age		.08** (0.01) [1.09]		.08** (0.01) [1.09]
Employment status: no work, no pension		-.94** (0.22) [0.39]		-.95** (0.22) [0.39]
Employment status: retired early		-1.20** (0.32) [0.30]		-1.20** (0.32) [0.30]
Employment status: flexible pension		-1.60** (0.26) [0.20]		-1.60** (0.26) [0.20]
Employment status: working part time		-.57** (0.15) [0.57]		-.57** (0.15) [0.56]
R _N ²	.02	.08	.02	.08
Number of observations	2,193	2,110	2,193	2,110

Notes: * $p < 0.05$; ** $p < 0.01$. Binary logistic regression of choosing to continue working. Models 1 and 2 assess the effect of adding a pension calculator link to the checklist, thus comparing treatment groups C and D to groups A and B. Model 1 controls for survey condition only, Model 2 additionally controls for participant characteristics. Models 3 and 4 assess the effect of changing the ordering of the two early retirement options within the checklist in a similar fashion, but the base category is the alternate treatment groups (treatment groups A and C).

Source: Authors' elaboration.

overview of subgroup analysis, but none of the effects are statistically significant).¹⁰ There is no evidence in support of either hypothesis 2a or hypothesis 2b that addressed ordering and calculator effects.

Confidence and information search

After indicating their preference, respondents were asked how confident they were in their choice. Confidence in choice was at least as high in each of the treatment conditions as it was in the control condition. Relative to the control condition,

10. This article is supplemented by an Appendix (developed by the authors and made available to readers). See Supporting Information, A.4.

confidence was significantly higher in the two treatment conditions that presented the familiar option *early retirement* before the recently launched alternative *flexible pension*: treatment group Earlyfirst_nocalc vs. control (OLS regression: $t = 2.14$, $p = .03$) and treatment group Earlyfirst_calc vs. control (OLS regression: $t = 2.68$, $p < .01$). This systematic pattern recommends prompts Earlyfirst_nocalc and Earlyfirst_calc as best at helping respondents make sense of the complex and novel choice introduced by the new flexible pension. Therefore, we obtained limited evidence to support our third hypothesis on the prompt influencing confidence-in-choice.

Next, we conduct exploratory analysis to check whether adding a pension calculator link had any effect on confidence, we do this by pooling treatments Earlyfirst_calc and Flexfirst_calc. We find that there is no significant difference in confidence when the link is provided to when it is not (treatment groups A and B): OLS regression $t = .75$, $p = .75$, nor when we take the relevant controls into account: OLS regression $t = .50$, $p = .62$ (Table 5).

Furthermore, we checked for activity in clicking the provided pension calculator. We could not obtain individual level data on click rates, as click tracking was not allowed by the research ethics committee decision – instead, we rely on treatment group level data. With this in mind, we find that nearly 25 per cent of participants who were presented with the pension calculator link also clicked on it (the link was only shown to treatment groups Earlyfirst_calc

Table 5. OLS regression results with confidence in choice as the dependent variable

	Coefficient (standard error)
Treatment A	.25* (.11)
Treatment B	.00 (.11)
Treatment C	.35* (.14)
Treatment D	-.10 (.14)
Age	.07** (.01)
Employment status: no work, no pension	-.11 (.16)
Employment status: retired early	-.13 (.24)
Employment status: flexible pension	.41* (.17)
Employment status: working part time	-.15 (.12)
R ²	.04
Number of observations	2,110

Notes: * $p < 0.05$; ** $p < 0.01$. OLS regression of self-reported confidence in one's choice of whether to retire or continue working, measured on a 10-point scale, with 1 indicating the least confidence and 10 the most confidence.

Source: Authors' elaboration.

and Flexfirst_calc). However, the bounce rate (defined by staying on the page for less than 10 seconds) of those viewing the calculator was very high, an average of 86 per cent. Therefore, only 14 per cent of the people who clicked on the calculator link stayed there for more than 10 seconds. This suggests that participants were interested in obtaining information about their pension, but the calculator site did not engage them.

Test for heterogenous treatment effects

Our results suggest that a prompt can call to mind information about relevant factors, such as health and finances, which cause people to update their preference on when to retire. An important policy question is whether that finding remains true for those participants who currently face the offer of early retirement, i.e. those persons in our sample aged 60+. When we restrict the sample to those respondents, we find the effect of the prompt is just as powerful; in a logistic regression the pooled treatments have a coefficient of .61 ($p < .01$) (Table 6), a slightly larger effect than the 0.58 that was observed for the full sample in Model 1 of Table 3.

A second subsample that is especially policy-relevant are those who are currently working. We discard from our sample people who are already in flexible or early retirement and those who do not work or have not disclosed their employment status. We obtain a sample of 1,763 participants. Table 7 replicates the analysis applied in Table 3 on this subsample of working participants and shows the results are very similar to those from the full sample – the pooled treatments have a positive coefficient of .57 ($p < .01$) compared to .58 in the full sample, and the individual treatment coefficients are also within .02 points of analogous analysis in the full sample.

In short, we observe significant effects of our prompt among the most policy-relevant participants. This speaks to the robustness of our results.

Discussion

Summary and mechanisms

The aim of this study was to assess whether retirement preference and confidence in that choice change when people are prompted to think about their personal situation. Our study found that our prompt had a substantial impact on retirement intentions. Those who saw the list of topics to consider before making the pension choice were much more likely to prefer to continue working than those not exposed to it. The direction and scale of the effect of the prompt was

Table 6. Main treatment effects on a subsample of participants aged 60–64 (binary logistic regressions of continuing to work)

Treatment type	Coefficient (standard error) [Odds-ratio]		
	Model 1	Model 2	Model 3
Any treatment (all treatment conditions pooled)	.61** (.21) [1.84]		
Treatment A		.58* (0.26) [1.78]	.68* (0.27) [1.97]
Treatment B		.54* (0.25) [1.71]	.58* (0.26) [1.79]
Treatment C		.70* (0.30) [2.01]	.79* (0.32) [2.21]
Treatment D		.73* (0.32) [2.07]	.82* (0.34) [2.28]
Age			.11 (0.08) [1.11]
Employment status: no work, no pension			-1.54** (0.44) [0.21]
Employment status: retired early			-1.42** (0.38) [0.24]
Employment status: flexible pension			-1.55** (0.31) [0.21]
Employment status: working part time			-.40 (0.29) [0.70]
R _N ²	.02	.02	.13
Number of observations	538	538	538

Notes: * $p < 0.05$; ** $p < 0.01$. Binary logistic regression of choosing to continue working on a subsample of participants aged 60–64. Model 1 accounts only for the pooled effect of the treatments, Model 2 assesses each treatment separately. Model 3 controls for survey conditions.

Source: Authors' elaboration.

consistent across the four variants, which included reordering of prompt items and providing a link to a pension calculator.

There are two mechanisms that could explain the directional effect of our prompt. One is updating of preferences in response to the information called to mind by the prompt. In this view, the prompt guides respondents through a complex decision. The other is status-quo bias resulting from confusion induced by the prompt. In this view, the prompt adds to cognitive burden, causing some respondents to feel so overwhelmed that they stick to the status quo of continuing to work. These two mechanisms offer opposing predictions regarding our confidence-in-choice measure: confusion would cause confidence-in-choice

Table 7. Main treatment effects on a subsample of working participants (binary logistic regressions of continuing to work)

Treatment type	Coefficient (standard error) [Odds-ratio]		
	Model 1	Model 2	Model 3
Any treatment (all treatment conditions pooled)	.57** (.12) [1.77]		
Treatment A		.54** (0.14) [1.72]	.56** (0.15) [1.75]
Treatment B		.48** (0.14) [1.62]	.50** (0.14) [1.65]
Treatment C		.72** (0.18) [2.05]	.68** (0.18) [1.97]
Treatment D		.69** (0.17) [2.00]	.69** (0.18) [2.00]
Age			.08** (0.01) [1.09]
Employment status: working part time			-.57** (0.15) [0.57]
R ² _N	.02	.02	.06
Number of observations	1763	1763	1763

Notes: * $p < 0.05$; ** $p < 0.01$. Binary logistic regression of choosing to continue working on a subsample of only non-retired individuals within the larger sample. We arrived at this sample by discarding results from participants that had retired early, were on flexible retirement, did not indicate their employment status, or did not work. Model 1 accounts only for the pooled effect of the treatments, Model 2 assesses each treatment separately. Model 3 controls for survey conditions.

Source: Authors' elaboration.

to fall whereas updating of preferences would not. Confidence did not fall in response to our prompt. We conclude that the prompt had an effect by calling to mind information that respondents then used to update their preferences. This result implies that participants came into our survey without having asked themselves some basic questions that they deemed relevant to their retirement decision. The increase in confidence in two of our treatments suggests that respondents found the prompt helpful to making an informed choice.

The fact that the effect of the prompt is at least as large for those participants aged 60+, for whom early retirement is an available option, suggests that even those who currently face the decision of when to retire have not asked themselves basic questions about the appropriateness of retirement for them. This implies that people are neglecting to think through one of the most consequential decisions of their working lives. This conclusion is supported by

data from recent studies that focused on actual pension decisions, such as Gruber, Kanninen and Ravaska (2022) and Lalive, Magesan and Staubli (2023), who document a mere labelling effect on choice of when to take retirement.

Contribution of the current research

The current study provides evidence as to why some people retire earlier than is in their own best interest. It is because, when they are making their choice of when to retire, they fail to ask themselves some basic questions about the costs and benefits of retiring. Our survey experiment shows that the factors raised by our prompt had not been spontaneously considered by participants in the control condition (because, otherwise, our prompt would have been redundant, and no effect would have been detected). Therefore, we contribute to behavioural economics literature by showing the bounded rationality of such decisions. Our work also complements Gruber, Kanninen and Ravaska (2022) and Lalive, Magesan and Staubli (2023) in finding that people choose to take early retirement without thinking through the costs and benefits of doing so.

The main policy implication is that decision aids play a role in helping people come to an informed decision about when to retire. Various behavioural policy tools can be used for designing these, such as nudge-plus and boost (Nova and Lades, 2022). The tested prompt suggests that an intervention that signposts towards a considered choice and is presented in a timely situation helps people to come to an informed decision on when to retire. These results suggest that retirement outcomes would be improved by prompting those approaching retirement to consider what is optimal given their personal situation. This is an autonomy-enhancing solution and helps to overcome the one-size-fits-all interventions' critique presented earlier. The current research suggests one model of what this intervention might look like, but there are many others. We look forward to future research that applies prompts to real-world decision making.

Limitations and further research

Two obvious limitations of the current research concern the fact that it was a survey conducted on a self-selected sample and that it did not measure real-world retirement behaviour but instead measured stated preferences. Given the costs and ethical concerns around conducting field studies on retirement timing, this is standard in the literature (e.g. Greenberg et al., 2023; Johnson et al., 2016.; Knoll et al., 2015; Liebman and Luttmer, 2015). Recent research documents that survey measures of intention reliably predict actual retirement decisions (Hoffmann and Plotkina, 2020). For instance, Solem et al. (2016)

found in a longitudinal study that the correlation between the preferred age of retirement stated in an earlier wave of data collection and the age at which that respondent actually retired was strong ($r = 0.51$) and that the preferred age of retirement explained 26 per cent of the variance in actual age of retirement. Given the many shocks that can cause people to deviate from their long-term plans, these correlations are strikingly high and suggest that stated intentions are a reasonable proxy for retirement behaviour.

While there are advantages to testing this sort of intervention in a survey before applying it to real-world retirement decisions (for a policy-relevant example, see Robinson and Comerford, 2020), it leaves question marks about the degree to which our data capture something meaningful about actual behaviour. We caution readers against inferring that a 50.9 per cent increase in work continuation would in fact result from using our prompt as an intervention, nor will it be the same magnitude across countries. The finding we take from our experiment is that our prompt can help guide people through the retirement decision and boost their confidence in it.

Another limitation of our research is that it tested only a small subset of the possible prompts that could be tested. For instance, we could have prompted consideration of the projects that people might pursue during their retirement. Or we could have tested how emotive language impacts choice. In the current research, we attempted to keep our prompts as neutral as possible. We even tested whether the order in which we presented neutral information – the range of options available – impacted choice. We deliberately sought to avoid nudging our participants.

A final limitation of this study is that we cannot be sure that we were successful in avoiding nudging our participants. This is an important question because an unintended nudge could induce regret in the participant. Whereas a boost equips the participant with the competencies required to come to an informed preference (Hertwig and Grune-Yanoff, 2017), an unintended nudge might mislead the participant (for an example, see Ubel, Comerford and Johnson, 2015). While we cannot entirely rule out this “unintended nudge” mechanism, one piece of evidence against it is that two of our four treatment conditions made participants significantly more confident in their choice. This result suggests that the prompt caused an increase in participants’ own perceptions of their decision-making competencies, in line with the definition of a boost.

Conclusions

We find evidence that people neglect to ask themselves some basic and obvious questions prior to deciding to take early retirement. This might explain people drifting into early retirement and later choosing to return to the labour force.

We contribute to behavioural economics and policy literature by showing that a prompt can help people better navigate the decision of when to retire. Therefore, such a signpost can remedy sleepwalking into retirement.

Data Availability Statement

The data underlying this article will be shared on reasonable request to the corresponding author.

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Supporting information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Understanding clerical decisions in granting social assistance: Insights from national social security officials in Brazil

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Abstract Street-level professionals, such as social workers, shape policy implementation by exerting discretion. However, it remains unclear how other street-level bureaucrats (SLBs), who are not considered to hold a professional status and who perform highly regulated activities, can do the same. Even though the decision-making leeway of these SLBs is marginal, the aggregated effects can be strong. This is especially true for the social security systems of large developing economies, such as Brazil's National Social Security Institute (INSS), the operation of which depends very heavily on the roles played by INSS officials. This study addresses how these officials perceive their discretion. It applies an analytical framework, based on street-level bureaucracy and discretion theories, to qualitatively approach the survey data ($n = 486$). The findings evidence diverse ways in which officials perceive their discretion, providing insights for policy makers and management. Based on the findings, the proposed model can also be adapted to other national social security system contexts.

Keywords social security administration, social protection, developing countries, BRICS countries, Brazil

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Introduction

The importance of street-level bureaucrats in welfare implementation has been widely studied (Brodkin, 2020; Lipsky, 2010; Zacka, 2017). Regardless of recent advancements in information technology (IT) and the global trend in the digitization of services, social security systems still have need for the important role played by such agents – especially in the case of complex, selective social assistance policies (Alshallaqi, 2022; Buffat, 2015). For beneficiaries, these bureaucrats are the human face of the welfare state who have the ability to shape people's lives using their decision-making power (i.e. discretion) in granting or denying welfare benefits (de Andrade and Pekkola, 2022; cf. Gofen, 2014).

In many cases, these agents may belong to conventional professional categories of workers, such as schoolteachers and social workers. However, social security systems are often administered by street-level bureaucrats who neither belong to professional groups nor enjoy legitimate professional autonomy. Their office duties are not considered professional activities, as they are mostly standardized, streamlined by IT systems and constrained by management (Buffat, 2015; Hupe and Hill, 2007; Noordegraaf, 2015). These officials may be better referred to as public service clerks, whose role is understood as essentially clerical rather than professional (Crompton and Jones, 1984). Nevertheless, they can play significant roles in public service bureaucracies, particularly in the Global South, where the conventional professional workforce is often limited (Campos and Peeters, 2022; Lotta et al., 2022).

The frontline officials responsible for granting benefits who work for Brazil's National Social Security Institute (*Instituto Nacional do Seguro Social* – INSS) are no exception. As an aggregate figure, decisions made by these clerks ultimately determine how the equivalent of 178 billion US dollars (USD) is distributed to 36 million Brazilians every year (CGU, 2024). The discretionary choices made by INSS officials, even within their limited scope, can significantly impact resource distribution, which is a critical issue in Brazil's large and unequal economy (Matijascic and Kay, 2014; Silva and Afonso, 2023). Despite the crucial role of these clerks in shaping social security policies in developing economies, research focusing on them remains scarce (Peeters and Campos, 2022; Lotta et al., 2022). In general, the street-level bureaucracy literature often overlooks nonprofessional/ clerical bureaucrats, focusing instead on conventional categories of professional workers and on Global North contexts.

The present study addresses this research gap by analysing how social security frontline officials (clerks) working for Brazil's INSS perceive their discretion when deciding on social assistance benefits (Thomann, Van Engen and Tummers, 2018). Empirically, the study applies thematic content analysis on open-ended responses from a cross-sectional survey. It explores the following

research question: *How do Brazilian social security clerks perceive their discretion on cash-based social assistance in socio-regulatory and politico-economic aspects?* The findings provide valuable insights for Brazilian policy makers and management and contribute to the development of similar adapted theoretical models for assessing the discretion of social security clerical agents in diverse contexts.

The rest of this article is structured as follows. First, the Brazilian national social security context, its organization, and the INSS frontline officials' (clerks) duties are detailed. Second, their benefit-granting role is framed in light of the street-level bureaucracy literature. Third, we devise a framework to analyse these agents' discretion according to their perceptions, drawing on theories of street-level bureaucracy and professional discretion. The subsequent sections specify the methods applied and report and discuss the findings, highlighting the heterogeneity in officials' perceived discretion and how this relates to different underlying role identities.

Context: National social security policy and its organization in Brazil

In this section, we present the context for the national social security policy and its organization in Brazil, especially with regard to the granting of benefits. First, we briefly introduce the Brazilian context and its social security system. Second, we provide an overview of the National Social Security Institute (INSS) and its organization. Third, we introduce the social benefit systems administered by the INSS. Fourth, and most importantly, we introduce the role of frontline INSS officials in the granting of benefits.

Brazil, a large Global South developing economy, ranks amongst the world's ten largest countries by population, landmass and economic output. With a population of 203 million people living in an 8.5 million km² territory, it has an annual GDP of almost USD 2 trillion (IBGE, 2023; UNDESA, 2020; World Bank, 2020). However, the country struggles with persistent structural inequality. For over a century at least, Brazil's Gini index has remained above 0.5 – a scenario that highlights the critical role of welfare policies (World Bank Group, 2023).

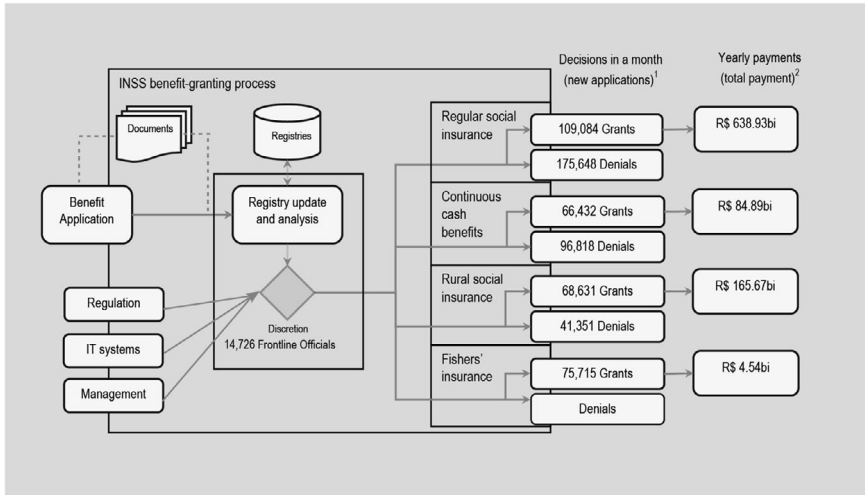
Politically, Brazil is organized as a federation of 27 states comprising over 5,500 municipalities. These entities, along with the federal government, share responsibility for administering a wide range of welfare policies. For example, health and education systems, as well as complex social assistance programmes, such as the *Bolsa Família* Programme (*Programa Bolsa Família* – PBF), are coordinated across federal, state and municipal levels (see Paes-Sousa, Ribeiro Dantas de Teixeira Soares and Kleiman, 2011). However, some welfare policies are provided in a centralized fashion, such as the national social security system, which is the focus of this research. The complexity of the Brazilian welfare system

also stems from a series of reforms aligned with different welfare state projects, resulting in a two-tier system that aggravates the challenges of inequality. The system provides comprehensive but underfunded public services in health care, education and social assistance while also supporting private providers through tax incentives (see Matijascic and Kay, 2014). Consequently, lower-class and middle-class citizens often do not access the same welfare service providers. An exception to this is the national social security system, whose cash-based benefit systems cater to eligible citizens of all social classes when they are temporarily or permanently unable to work. Furthermore, services related to these different systems are provided by the same organization, the INSS.

The INSS, a leading social policy-implementing agency in Brazil, is a “federal autarchy” in the Brazilian regulation that enjoys the legal status of a semi-autonomous public agency, with relative managerial and fiscal independence from central executive power (Marques, Da Cruz and Gonçalves, 2018). Most of the INSS’s management is centralized in the Brazilian capital, Brasília, but it also has two layers of decentralized middle management: 1) six regional superintendencies, which oversee INSS operations in six parts of the country’s territory (Southeast I, II and III; South; Northeast; and North/Central West), and 2) 91 executive management offices, which are distributed according to their regional demographics. These structures coordinate regional communication, personnel training, outsourced contracts, local cooperation agreements, compliance, logistics and activities related to the granting of benefits, besides supervising the network of 1,676 frontline as well as “virtual service” offices (INSS, 2021). Typical frontline offices provide in-person services; however, in most cases, these are mediated through call centres, digital platforms and collaborations with partner organizations (de Andrade and Pekkola, 2024; Moreira, 2020). In virtual offices, officials do not necessarily share the same physical space, and management is centralized in upper structures (INSS, 2021). The granting of social security benefits takes place in both types of offices.

The INSS’s role in granting benefits concerns four social security cash-based benefit systems. One system covers national social insurance schemes, granting access to mandatory regular benefits such as old-age pensions, survivors’ benefits and maternity allowances for citizens in diverse economic situations. The other three involve selective social assistance mechanisms, such as means-tested benefits. Continuous cash benefits (*Benefícios de Prestação Continuada* – BPC) target the elderly or disabled poor on a social assistance basis, regardless of their social insurance contribution record. The rural social insurance system (*Previdência Rural*) and the fishers’ closed-season unemployment insurance (*Seguro Defeso*) are hybrid in nature, involving both contribution-based and means-tested requirements (see Caetano et al., 2015; Schwarzer and Querino, 2002). Collectively, these systems distribute approximately USD 178 billion to 36 million people

Figure 1. INSS officials' core duties in benefit processing



Notes: 1) Decisions taken on 12.2023. Sickness benefits and disability pensions are excluded. Number of denials not available for fishers' insurance benefits (Brasil, 2024; CGU, 2024). 2) Year 2022 (CGU, 2024). R\$ = Brazilian reals.

Source: Authors' elaboration.

every year,¹ corresponding to the largest share of cash-based social security provision in the country (de Andrade, 2020a; CGU, 2024).

In practice, these systems' benefits are processed and granted case-by-case, by a common pool of 14,726 INSS frontline officials² (i.e. social policy clerks) with permanent work contracts (de Andrade and Pekkola, 2022). Although their duties are bound by strict regulation, IT system rules and management, they decide on around 600,000 benefit applications per month, making relevant any marginal influence on how these decisions are taken. Their leeway for decision making (i.e. discretion) is the object of this research. Figure 1 provides a simplified representation of the INSS process for granting benefits, highlighting the influence/constraints imposed by the regulation, IT systems and management on INSS frontline officials' discretion. Furthermore, the monthly benefit grants/denials and the yearly payment numbers illustrate the impact that their aggregated decisions can have on social security benefit expenditure and,

1. In Brazilian reals (R\$), the equivalent figure is R\$ 894 billion.
 2. There are benefit-granting stages which require a decision from a medical expert or social work professional, particularly in the case of sickness allowances and continuous cash benefits for the disabled. Additionally, a floating share of the granting of benefits is performed automatically (de Andrade, 2020b).

ultimately, the country's economy. The next section explores the role of these agents in light of the street-level bureaucracy and professional discretion literature.

Street-level clerical bureaucracy: Frontline INSS officials

Most welfare policy implementation systems rely on street-level bureaucrats, whose activities take place on the frontline of public services, dealing directly with citizens (Lipsky, 2010; Zacka, 2017). They are often conventional categories of professional workers, whose roles entail wide “discretion” and the effective control of a major part of public spending (Evans and Hupe, 2020; McCann and Granter, 2019; Møller and Hill, 2021; Pekkola, 2014). Discretion is a fundamental aspect of their professional autonomy and a focus of street-level bureaucracy research (Chang and Brewer, 2022; Gupta, Thakur and Chakrabarti, 2022). It is instrumental in adapting abstract policy designs to real-world cases (Tummers and Bekkers, 2014; Virtanen, Laitinen and Stenvall, 2018) and filling the “policy voids” of implementation systems (Campos and Peeters, 2022). In contrast, expanded discretion or leeway for decision making in the frontline of public services can lead to “street-level divergence” (Gofen, 2014) which, on occasions, may be influenced by surreptitious political agendas (Brodtkin, 2011; Gassner and Gofen, 2018).

However, in cash-based social security provision, much depends on the decisions enacted by “nonprofessional” street-level bureaucrats (Hupe and Hill, 2007; Noordegraf, 2015). In Brazil, this implementation is entrusted to frontline administrative INSS officials (hereafter referred to as (clerical) INSS officials or Brazilian social security clerks), who do not share a common professional background or formation and, thus, do not enjoy the same autonomy for decision making as teachers or social workers. Their activities are clerical or “canonical” in nature, pursued through strictly regulated procedure scripts (Noordegraaf and Abma, 2003). Frontline INSS officials are responsible for maintaining registries in IT systems and determining whether to grant or deny applications for social security benefits, based on interactions with citizens, their documents and governmental registry databases. Their training and duties are organized under typical managerial standards; they are subject to individual performance evaluations, conducted in an output-based, centralized fashion (see Almeida and Barbosa, 2019; see also Pinheiro, Santos and Cunha, 2018). As a result, their activity is highly routinized and controlled, allowing only marginal space for formal discretion, which is constrained by regulation, the systems they operate and managerial instruments (Figure 1).

However, even residual changes in the use of INSS officials' discretion can collectively have substantial economic impacts through the shifting of benefit

award/denial rates. INSS officials navigate in a complex and multilayered environment of legal and procedural guidelines. These guidelines have been developed over time and are successors to multiple administrative reforms. Owing to political volatility, these frameworks are intricate and unsteady and are highly contingent on ad hoc court decisions (see, especially, CNJ, 2020; Donadelli, Cunha and Dussauge-Laguna, 2020; cf. Evans, 2011; Silva and Afonso, 2023; Piore, 2011). Coupled with shifting performance criteria and management turnover, this gives rise to conflicting goals and directives, opening new borderline grey zones of decision-making leeway (Evans and Hupe, 2020; Evans and Harris, 2004; Lipsky, 2010). Consequently, routine procedures may be challenging to streamline or automate digitally, compromising the power of IT systems to reduce discretion (Alshallaqi, 2022; Buffat, 2015; Cardoso, 2020). Moreover, institutional frailty, severe resource constraints and inequality in the Brazilian national economy often make policy goals unfeasible and rules ineffective. This environment opens spaces for informal practices to deal with clients' strategic behaviour or to cover policy voids – “policy improvisation” (Lotta et al., 2022; Peeters and Campos, 2022).

As a result, INSS officials' formal, de jure discretion limits are blurred by borderline grey zones. An overlaying but displaced de facto granted discretion becomes wider and fuzzier despite their nonprofessional status (cf. Evans, 2020; Hupe, 2013). This de facto discretion boosts INSS officials' typically clerical power to adapt or distort policy outcomes.

To date, only a few studies have approached nonprofessional/clerical discretion in welfare policy implementation – often addressing it indirectly or tacitly or “black boxing” it as part of professional work or administrative process (Breit, Andreassen and Salomon, 2016; Breit, Andreassen and Fossetøl, 2022; Dudau, Kominis and Brunetto, 2021; Hupe and van der Krogt, 2013; Jacobsson, Wallinder and Seing, 2020; Keiser, 2010; Masood and Nisar, 2022; McCann and Granter, 2019). Despite the critical role public service clerks play in developing economies' social policies, few studies have targeted them in these contexts (Peeters and Campos, 2022; Lotta et al., 2022). INSS officials' typical administrative clerical profile, as well as their influence over a significant share of a large developing economy's social security system budget, makes their case a fit for addressing this gap (cf. Seawright and Gerring, 2008).

A clerical discretion scope model

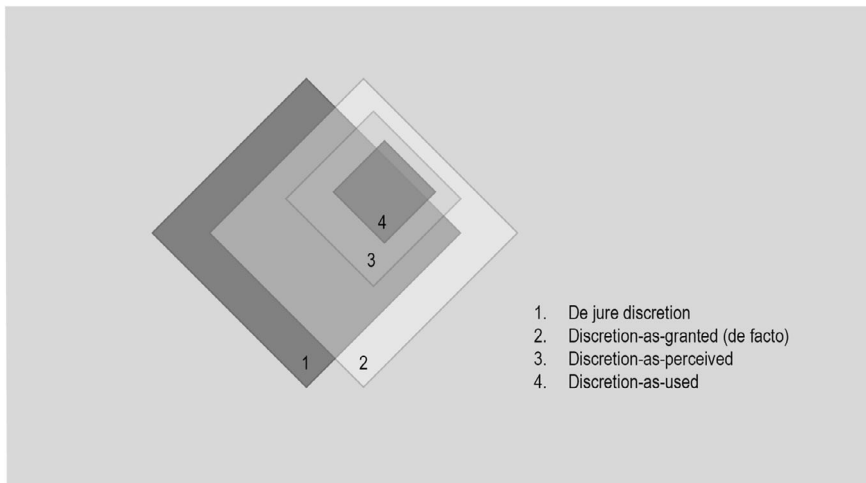
Understanding Brazilian social security clerks' de facto discretion is challenging, given its contingency on fleeting determinants. However, as posed by Thomann, Van Engen and Tummers (2018), the ways bureaucrats effectively use their discretion (discretion-as-used) are restricted not only by the width of

“discretion-as-granted” but also by “discretion-as-perceived”. That is, bureaucrats can only use their widened leeway for decision making “to the extent they perceive they possess it”. Therefore, it is more relevant to address their perceptions concerning the discretion they enjoy than its formal or de facto limits. The relationships among the different discretion concepts can be understood as a set of overlaying planes. Figure 2 illustrates these overlaying planes: 1) the formally expected, de jure discretion plane is displaced when translated to discretion-as-granted/de facto discretion; 2) the practical scope of discretion-as-granted is reduced to the plane covered by discretion-as-perceived (object of this study) and 3) discretion-as-used (i.e. the actual decisions made) is contained in the plane of discretion-as-perceived. However, the residual leeway for decision making can still include a grey zone beyond de jure discretion.

Relying on discretion-as-perceived also enables the study to consider the effects of softer and teleological institutions as determinants of bureaucrats’ actual decision-making leeway. Hupe’s (2013) theory on discretion’s dimensions provides a reasonable starting point for doing so.

Hupe (2013) proposed four perspectives to specify discretion in street-level bureaucracy studies – juridical, sociological, economic and political – which were further developed by Evans and Hupe (2020). The juridical, or regulatory, view often depicts discretion through Dworkin’s (1977) doughnut metaphor. Discretion is bounded by a “dough” structure, “baked” from explicit regulation as well as legislative culture, and legal principles (Evans and Harris, 2004;

Figure 2. *Overlaying discretion planes*



Source: Authors’ elaboration.

Hupe, 2013; Mascini, 2020). Decision making is prescribed top-down by the delegated authority. Bureaucrats are expected to conform to regulations; thus, free judgement is the exception and made possible only by the absence of regulations, i.e. the doughnut's hole. According to Hupe (2013), the juridical view is complemented by the sociological view, which highlights the institutional determinants of discretion. It builds upon legitimate (professional) autonomous agency while considering the "softer" occupational and organizational determinants (Evans, 2011; Simon, 1957). The sociological view is further incremented by a broader range of microinstitutional factors (Oberfeld, 2020; Rice, 2013). In the case of clerks, the "structural dough" is thicker by default, involving highly prescriptive rules and standardization, leaving less space for discretion/autonomy (Dudau, Kominis and Brunetto, 2021; Hupe and van der Krogt, 2013; Jacobsson, Wallinder and Seing, 2020).

In turn, both economic and political views of discretion operate under a stronger teleological character. Instead of prescribed scripts, or institutions, they focus on "prescribed outputs" and "desired outcomes", respectively (Hupe, 2013). The core of the economic view is principal-agent theory. Bureaucrats are agents expected to exert their discretion, envisaging the principal's interests. These interests are manifested as prescribed outputs, for instance, through managerial instruments such as performance standards, instead of regulatory conformity (Wolfson, 2020). While supporting managerialism, the economic view also highlights the information asymmetry/moral hazard problem. As the principal cannot fully control the agents, they have (discretion) space to maximize the realisation of their own interests (Brodkin, 2011; Hupe, 2013). In turn, the *telos* of the political view is the common good-related desired outcomes, as (typically) provided by policy goals. The discretion then lies in the diverse paths bureaucrats can take to pursue these goals. However, policy goals are often unclear or conflicting at the street level, broadening frontline officials' discretion when operating public policies (Evans and Harris, 2004; Hupe, 2013; Lipsky, 2010). Moreover, economic outputs and political outcomes interact in the same dimension. Their interplay and misalignment confer policy provision-shaping powers to street-level organizations and bureaucrats (Brodkin, 2020).

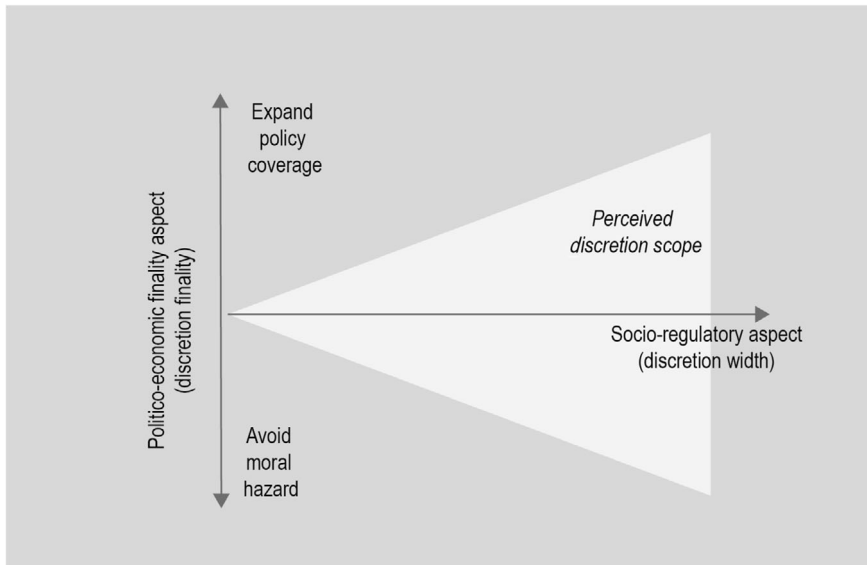
Considering the conceptual overlap among the four views, they can be combined to approach the aspects of bureaucrats' perceived discretion "scope". Regulatory and sociological constraints and enabling conditions set scope "width", while economic and political goals or aspirations set direction or "finality". Although width can be reduced to a single dimension (from narrower to broader discretion), finality depends on the (conflicting) policy goals at stake under bureaucrats' duties. Our interest lies in the discretion scope of Brazilian social security officials. In particular, we investigate how they perceive their discretion when deciding on applications for cash-based social assistance. Their

choices can be reduced to two: grant or denial. In terms of politico-economic finality, the selective nature of Brazilian social assistance imposes a quest for a righteous decision on resource allocation (bounded by socio-regulatory constraints). Thus, it is imperative to minimize cheating and undue exploitation of the system (i.e. moral hazard, such as free-riding, dependency or inactivity; see Laenen and Roosma, 2021). In contrast, to improve resource distribution, all eligible applicants should have their benefits granted. Thus, it is imperative to ensure that those in need receive their benefits, avoiding non-takeup. These are typical competitive imperatives in selective policies and are clearly expressed in INSS managerial instruments (McKinnon, 2016; cf. INSS, 2021). In short, in the specific case of decisions to grant social assistance benefits, politico-economic finality can be reduced to a choice among two “public goods”: to avoid moral hazard or to expand policy coverage.

Finally, the model in Figure 3 illustrates how the socio-regulatory/width and the politico-economic/finality aspects can be used to understand Brazilian social security clerks’ discretion scope in the discretion-as-perceived plane.

The socio-regulatory aspect/width (x-axis) is a cumulative dimension, amplifying decision possibilities as discretion becomes wider. The politico-economic aspect/finality (y-axis) indicates the overall decision direction, which is towards either

Figure 3. *Perceived discretion scope across socio-regulatory/width and politico-economic/finality aspects*



Source: Authors’ elaboration.

avoiding moral hazard or expanding policy coverage. The resultant area represents the officials' perceived discretion scope: the larger the area, the more decisions can express their finality in one direction or the other (aiming to avoid moral hazard or expanding policy coverage).

Methods

In this study, we explored the ways in which clerical INSS officials perceive their discretion. To this end, we focused our analysis on how these officials understand their leeway for decision making concerning social assistance benefits. These benefits involve welfare selectivity rules (e.g. means testing) which render clerks' duty more complex when deciding whether to grant or deny them. We started from the theory that clerical INSS officials' discretion scope is based on their understanding of the regulatory apparatus and institutional determinants. However, these are modulated by the overlaying of prescribed and perceived outputs and outcomes, such as performance and policy goals. The combination of these two dimensions (socio-regulatory/politico-economic) opens larger spaces for perceived discretion, even though INSS officials' decisions are supposed to be completely determined by regulatory frameworks.

This research investigated the question of "*how Brazilian social security clerks perceive their discretion on cash-based social assistance in socio-regulatory and politico-economic aspects?*".

We drew on a nationwide cross-sectional electronic survey administered to INSS officials. The survey targeted officials working in INSS frontline offices between 17 May and 2 June 2021, of which 486 respondents answered an open-ended question. Although the sample is not representative of the population, it covers a comprehensive spectrum of INSS officials' profile combinations (see Appendix, Table A.1).³ Furthermore, the typicality of their duties in a social security system ensures a high degree of transferability to similar settings (i.e. social security public agencies in large developing economies) and potentially to different contexts (cf. Stenfors, Kajamaa and Bennett, 2020).

Our analysis focused on the answers to an open-ended question concerning the challenges officials face in granting social assistance benefits. By addressing these challenges, we can understand how these officials perceive their discretion space. Their reflections show the types of dilemmas they face in their most discretion-intense moments. They reveal regulatory loopholes, the range of options and tools officials must consider when deciding, and the tendency they have to decide in one way or another. Thus, they either describe or idealize the

3. This article is supplemented by an Appendix (developed by the authors and made available to readers). See Supporting Information, A.1.

limits of their leeway for decision making and the ways in which they tend or intend to use it – indicating the scope of their perceived discretion, directly or indirectly. The open-ended question’s wording was as follows:

There can be big challenges in granting benefits of a social assistance nature, either to avoid paying undue benefits or to ensure that those entitled to them effectively receive them. What are, if any, the main challenges you face in this regard when performing your duties? These could, for example, be related to misinformation and other communication issues, fraud, blind spots or complexity in regulation.

The question was developed from a pilot survey conducted with officials from different backgrounds ($n = 15$), who suggested the inclusion of example challenges in its wording to enable discussion about them. These were regarded as general issues in granting social assistance benefits and were expected to have increased incidence in the data. Thus, the analysis focused on topics emerging beyond the examples. In addition, as the question was optional, the answers were expected to reflect “top-of-mind” issues, rather than thorough analyses and opinions on every aspect of the granting of benefits. Thus, while some answers contained just one word, for instance, “Fraud” (Case 3), others provided long, comprehensive accounts, as the quotations in the empirical analysis section show.

The first step of the analysis involved familiarization with the data and data-driven open coding, free of theoretical backdrops. This was done in a mostly semantic yet reflexive fashion, as proposed in Braun and Clarke’s (2021) reflexive thematic analysis methods. Accordingly, we acknowledged the position of one co-author of this study as a former INSS official, whose standpoint was instrumental for devising the codes. The co-author’s acquaintance with the agency’s organizational culture and regulations was called upon to interpret jargon or references to specific technical elements. Reflexive open coding resulted in a set of 109 codes corresponding to different challenges, issues or perceptions expressed by the officials. As a further step, similar and closely related codes were merged, reducing the total to 52, which occurred 1,130 times in the cases.

Next, we reviewed the open coding under an in-depth, directed content analysis interpretation (see Hsieh and Shannon, 2005), informed by the above proposed theoretical model, for approaching officials’ perceived discretion scopes. The codes concerning core discretion-related challenges were selected and latent occurrences were identified. This resulted in 21 codes, occurring 617 times, organized into four themes: when officials ask for 1) *narrower* or 2) *wider discretion* and when they aim to 3) *avoid moral hazard* or 4) *expand policy coverage*. The first two themes concern the socio-regulatory aspect, while the last two concern the politico-economic aspect of their perceived discretion. The results from the data-driven and theory-directed stages are available in

Appendix A.2.⁴ Finally, we analysed the code and theme co-occurrences. Atlas.ti 22 was employed in all analytic stages in the ways proposed by Friese, Soratto and Pires (2018).

Empirical analysis

Themes under the socio-regulatory/width aspect concern officials' thoughts on how much leeway for decision making they have or should have. That is, codes indicate whether officials ask for *wider* or *narrower* discretion than that which they currently enjoy, reflecting its perceived breadth and suitability. Under the theme of narrower discretion, accounts mainly bring perceptions of instability, vagueness or intricacy of the existing rules; those under wider discretion relate to a lack of mandate to broaden the analysis or investigation of benefit applications. The politico-economic/finality aspect includes codes concerning officials' perceptions about the inadequacy of social assistance benefits, suggesting the goals and priorities shaping their decisions. Codes in this aspect can, under one theme, indicate officials' aim to avoid moral hazard – preventing unintended welfare outcomes (such as dependency or inactivity) and shunning free-riders or straightforward fraud, cheating or dishonesty. Under the other theme, officials yearn to expand policy coverage – displaying ideas of laxer selective criteria, universality or complaints about non-takeup, that is, people not receiving benefits they are/should be entitled to. Table 1 provides an overview of the aspects, themes and codes. In the following, we examine the codes, paying special attention to the most recurring ones, and illustrate them with direct quotations translated from Brazilian Portuguese by one co-author (cf. Stenfors, Kajamaa and Bennett, 2020). Co-occurrences denote two codes present in the same answer and are reported whenever their existence or non-existence is meaningful.

Socio-regulatory aspect/width

The largest share of answers demanding narrower discretion are coded under *rules are too flexible* (76 occurrences). For these officials, rules leave undue leeway for decision making. They tend to resonate with the example posed in the question and state that rules have too many blind spots or are often obscure. An important share also straightforwardly state that rules are just *too complex* (41 occurrences, 19 co-occurrences), or that they provide *excessive discretion* (7 occurrences, 6 co-occurrences). Relatedly, many officials who complain about the flexibility of rules also report *analysis difficulty* issues

4. This article is supplemented by an Appendix (developed by the authors and made available to readers). See Supporting Information, Appendix A.2.

Table 1. *Aspects, themes and codes related to INSS officials' discretion*

Aspect	Theme (<i>official asks for/aims to</i>)	Code	Occurrences	
Socio-regulatory/Width	Narrower discretion	Analysis difficulty	26	
		Excessive discretion	7	
		Should just apply standards	10	
		Rules are too complex	41	
		Rules are too flexible	76	
		Rules are too unstable	9	
		<i>Total</i>	<i>169</i>	
	Wider discretion	Investigation shortcomings	67	
		Lack of discretion	5	
		Rules are too restrictive	14	
		<i>Total</i>	<i>86</i>	
		Politico-economic/Finality	Avoid moral hazards	Benefit misuse
	Cultural/general dishonesty			28
	Document fraud			15
False/omitted information	103			
Fraud by a third party	14			
General fraud	99			
Lack of accountability	9			
Social assistance can be harmful	4			
<i>Total</i>	<i>294</i>			
Expand policy coverage	Good faith principle		4	
	Social assistance is important		9	
	Unfairness		54	
	Universal basic income		1	
	<i>Total</i>	<i>68</i>		

Source: Authors' elaboration.

(26 occurrences, 11 co-occurrences), such as uncertainty, fear of mistakes, difficulty framing applicants' profiles and unstable or subjective applicants' economic conditions – leading to divergent interpretations, inconsistent analyses and mistakes. One answer summarizes these issues:

“The main challenges are [related to] complexity: The norms are not in one place and [we have] to seek the understanding of a subject in letters, ordinances,

amendments, decrees, etc., and of course, there are blind spots in the norms, which everyone interprets in their own way. And there are still many public civil suits to pay attention to” (Case 316).

The last sentence refers to granting rules that are sometimes distorted by judicial decisions over public civil suits: collective interest actions compelling the INSS to observe different rules from those established by the agency (CNJ, 2020). This increases the complexity of granting procedures by assigning different rules and asymmetric treatment to clients residing in different Brazilian states (INSS, 2021). Similarly, some officials complain that *rules are too unstable* (9 occurrences); that is, they are changed too often: “confusing and frequently altered legislation, confusing and frequently altered workflow” (Case 669).

Overall, codes under the narrower discretion theme show officials struggling with decision making and how leeway for interpretation can be problematic. While evidencing the existence of an undesired breadth of discretion, these accounts show compliance with standardized procedures and hierarchical decision making. Some answers even mention that officials *should just apply standards* (10 occurrences) when exercising their role, offering an ultimate protest against too much room for discretion:

“I believe that we (officials) are here to grant benefits to those who have the right, regardless of anything. Many civil servants are working with the intention of denying benefits, looking for reasons to deny, when we have to analyse impartially, and comply with the law. The biggest challenges are the constant changes in understanding, ambiguous laws and rules, each employee applies them in the way that suits them, scattered norms, we need more clarity in understanding and uniformity in the application of the law” (Case 614).

Conversely, the wider discretion theme mostly includes complaints about *investigation shortcomings* (67 occurrences). These indicate a restriction of the means to contest applicants’ declarations, limiting the use of information from external sources or to assess situations *in loco*:

“With the decrease in [*in loco*] external investigation, most of the analysis is based on data declared by the applicant, which, in many cases, are not real” (Case 673).

“Currently, the granting of social assistance benefits has become too mechanized ... there are other ways of verifying whether a person fits the poverty criteria” (Case 390).

However, some officials directly criticize *too-restrictive rules* (14 occurrences), saying that they do not allow enough leeway for decision making. Typical examples include the strict income threshold for granting “Continuous cash benefits” (*Benefícios de Prestação Continuada* – BPC), a rule set by law and

executive decree, thus binding officials (Presidência da República, 2007). However, this same rule is repeatedly relativized by court decisions (CNJ, 2020). For officials facing the clients' reality, the income threshold for BPC can seem nonsensical:

“[the rule] has an excessively objective character, guaranteeing the benefit to someone with “X” income, but denying to others receiving “X” + 0.01 Brazilian reais (R\$), which is not reasonable in a fair society rooted in solidarity” (Case 567).

Other examples of complaints about overly restrictive rules refer to recent procedural changes aimed at process optimization and suggest a critique of managerialism:

“The latest regulations made by INSS to speed up or improve the analysis made the verification of the applicant's real situation much more fragile. If the applicant reports changes to the make-up of the family group at any time, the official needs to reconsider the situation” (Case 492).

Answers expressing concern for restrictive rules or limits to investigation, as well as those explicitly indicating a *lack of discretion* (5 occurrences), convey a will to delve deeper into the analysis, treat cases on a one-by-one basis and enjoy wider leeway for decision making. Overall, they signal a sense of yearning for professional-like discretion. Reinforcing the clear opposition between these answers and those demanding less leeway, there are only 8 co-occurrences among these themes. This suggests the existence of two distinct official profiles: those demanding narrower and those demanding wider discretion.

Politico-economic aspect/finality

The most reported moral hazard-themed code, *false/omitted information* (103 occurrences), relates to applicants distorting their real-life situation in self-reported data to gain access to benefits. This is expected since BPC, the social assistance policy most referred to by officials, partially relies on declarative, self-reported data. Distrust in these is often the cause of protests over investigation shortcomings (42 co-occurrences):

“The mechanisms to verify the veracity of [client] declarations are fragile, opening an easy path for fraud. Frequently, the official knows the client and knows that the declaration is false but can do nothing about it because there is no legal basis to do so” (Case 167).

Other moral hazard-themed codes related to fraud include *general fraud* (99 occurrences) assigned to unspecific references, often in short, undetailed answers. *Document fraud* (15 occurrences) is clear, concerning the use of false documents for gaining access to benefits, such as false identification cards.

Fraud by a third party (14 occurrences) occurs when someone besides the client is responsible for the fraud – usually intermediaries accused of inducting clients to cheat the system. Still connected to fraud, officials also point to a *lack of accountability* (9 occurrences) as a cause for moral hazard, understanding that punitive measures against fraudulent claimants are lax.

Some codes connected moral hazard to generalizations or systemic issues. A relevant number of officials mentioned *cultural/general dishonesty* (28 occurrences) as a root cause for challenges, assigning hazardous behaviour to cultural or conjunctural factors, or even to human nature:

“The major problem is the lack of honesty of human beings or [of] love for others, a reflex of a corrupt government” (Case 215).

“A large share of Brazilians have adopted the use of sometimes questionable alternatives to do a *“jeitinho”* [“way out”] and get public resources from welfare benefits, often victimizing themselves, or [faking] their health condition or social vulnerability to achieve their goals” (Case 551).

The second quotation reflects a common yet contested perspective in Brazil. Souza (2017) has delved into the academic and mediatic roots of this (*jeitinho*) and other ideas replicated in unempirical discourse, identifying them as unacceptable aspects of racist culturalism. Furthermore, *benefit misuse* (22 occurrences) concerns free riders thriving on loose policy design – though not necessarily connected to fraud:

“We should have our eyes wide open. Some are able to support themselves but seek welfare benefits [instead]” (Case 422).

A few officials expressed that *social assistance can be harmful* (four occurrences), connecting beneficiaries to risks of welfare dependency or inactivity or highlighting their failure to comply with reciprocal duties (e.g. social insurance contributions).

Finally, occurrences under the *expand policy coverage* theme are concentrated under the *unfairness* code (54 occurrences). The answers link rule-embedded injustice to the ideas that the level of granted benefits falls below the need for them (i.e. people who are entitled are not receiving them) and to overall inequality in society:

“The biggest challenge is reaching those in need. The rules are overly restrictive regarding who is entitled. I believe they should be more comprehensive” (Case 181).

“[The challenge is the] lack of integration of the INSS systems with other agencies and revision of legislation to allow more people to access this right” (Case 125).

The answers coded as *social assistance is important* (9 occurrences) highlight the idea of social assistance as a right. One response was particularly engaged in this endeavour:

“... within the institution there is still a great deal of stigmatization by colleagues regarding the social assistance benefit. This benefit is a right that is included in our Constitution, so, citizens who need it are not asking the State for a favour (therefore, they do not need to be “grateful” to the State or society), they are just fulfilling a right” (Case 541).

In a diffuse way, to aim for more policy coverage, some officials refer to the application of a *good faith principle* (4 occurrences) in case analysis. They advocate that clients/cases and their information should not be approached inquisitively:

“All actors involved should work focused on the principle of good faith, and accountability in cases of breach of trust” (Case 317).

In addition, one official referred to *universal basic income*, in relation to a complaint about fraud and as a solution to the lack of objective criteria for the granting of benefits. Thus, three different themes are combined into one statement, but it undoubtedly asks for wider policy coverage:

“[concerning] fraud attempts and the lack of more objective criteria for the receipt of these benefits – I believe that a universal basic income programme could replace and have more objective criteria than the current model” (Case 256).

Hence, despite the themes showing some degree of separation, overlaps are more common in the politico-economic/finality aspect than in the socio-regulatory/width aspect: codes co-occur only in 26 cases. Overall, co-occurrences across socio-regulatory and politico-economic aspects (110 in total) are far more common than those between themes under one same aspect. This is as expected, for there is no conceptual opposition between them.

Discussion: Socio-regulatory separation and politico-economic continuum

This section considers the behaviour of social security frontline officials when framed in relation to socio-regulatory separation and politico-economic continuum (see Figure 3). First, the analysis points to an expressive variation in both aspects. The socio-regulatory aspect shows officials’ varying yearnings for either narrower or wider discretion and, consequentially, varying perceived discretion scopes. However, regulations are strict and formal policy goals governing the granting of benefits are virtually the same for all officials. Hence,

this finding suggests a relevant mismatch between discretion-as-granted and discretion-as-perceived, reinforcing the importance of these categories for clerical bureaucracies (cf. Thomann, Van Engen and Tummers, 2018). As suggested elsewhere (Dworkin, 1977; Jacobsson, Wallinder and Seing, 2020), the “dough” in the doughnut metaphor can be made “soft”. The combination of regulation layering and institutional-level commands, such as law principles, organizational culture and policy goals, creates space for various perceived discretion scopes. Thus, a marginal degree of varied perceptions of discretion is expected – yet the detailed accounts provided by the responses to the survey question suggest an overly broad spectrum.

Furthermore, reflections coded under the *wider discretion* theme show a perceived discretion scope expanded beyond what could be expected from public service clerks constrained by managerial culture, strict regulations and IT systems. Wider discretion could raise the odds for policy improvisation, expected in institutionally loose and resource-scarce developing economy contexts (Campos and Peeters, 2022). Instead of acting in a clerical, canonical fashion, officials might, by drawing on gaps and rule inconsistencies, try to fill policy voids according to their personal conceptions of policy goals. However, the yearning for wider discretion can also reflect a degree of professional-like ideology or logic, changing discretion from a “judgement that has to be employed to apply a standard” to a judgement on both “the decisions and the criteria of decision making” (Dworkin, 1977; as in Evans and Harris, 2004, p. 882). In this sense, answers referring to a lack or loss of due discretion might be evidence of a longing for professional autonomy, instead of hopeless policy improvisation. The same applies when officials do not criticize the vagueness of rules and goals – these can duly widen discretion, justifying the power to interpret and properly fit rules to concrete cases. In effect, the explanations can conceptually overlap. The status of being a professional category of worker arises precisely from the capacity to shape or subvert policy (Evans and Harris, 2004; Lipsky, 2010), and “professional” is arguably a status developed more from power asymmetries than praxis (Johnson, 1972; cf. Hupe and van der Krogt, 2013). Indeed, the most detailed accounts under the wider discretion theme concern issues emerging from strict norms and deliberate discretion reduction policies (Cases 390, 492, 567, 673), not from a need for improvisation because of resource scarcity or loose institutions.

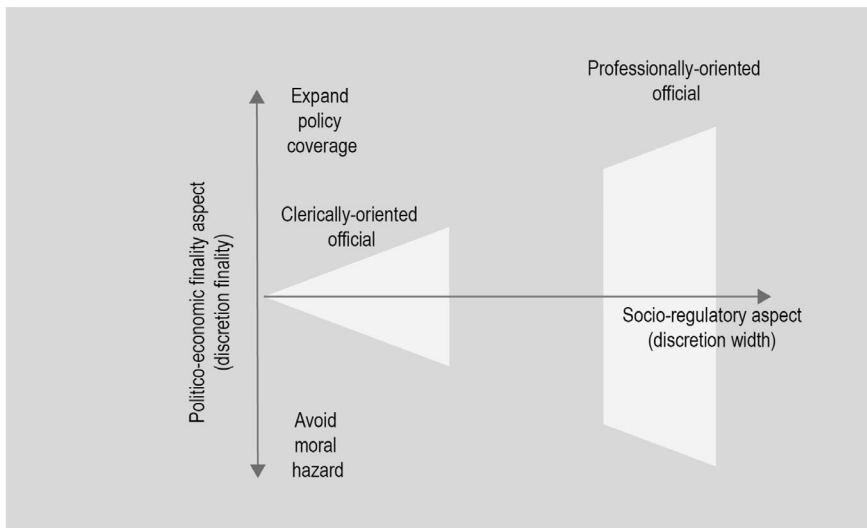
The separation between codes translating the willingness to enjoy less or more discretion also runs counter to earlier findings on clerical bureaucracies, namely Jacobsson, Wallinder and Seing (2020). INSS officials act in the context of strong managerialism, standardized rules and streamlining IT systems, sharing the same physical spaces and organizational culture. However, they do not seem to share uniform role identities. Rather, our findings hint at the presence of two different

identity groups, relatable to those found by Jacobsson, Wallinder and Seing (2020) in “separate” agency cultures. While some officials are “practical professional[s], operating according to substantive rationality (doing the right things in the best way)”, thus demanding discretion, others show “strong identity as civil servant[s], operating according to formal rationality (doing things the right way)” – shunning discretion (Jacobsson, Wallinder and Seing, 2020, p. 329).

Using the proposed model (see Figure 3) as an illustrative heuristic tool, Figure 4 represents how INSS officials’ different perceived discretion scopes are located across socio-regulatory and politico-economic aspects. The separation between them along the socio-regulatory aspect is emphasized, proposing the existence of two different groups: i) clerically oriented officials and ii) professionally oriented officials.

It is important to highlight the deontological nature of the socio-regulatory aspect in Figure 4, contrary to that of Figure 3. That is, it concerns officials’ “demand” for discretion and not their actual discretion. However, our data suggest that the ways in which a clerically oriented official perceives discretion tend to be fundamentally different from those who are professionally oriented. For clerically oriented officials, discretion is to be avoided, and following the rules for the sake of productivity or compliance is their expected choice. For professionally oriented officials, discretion is fundamental to the proper pursuit

Figure 4. INSS officials groups’ perceived discretion scope across socio-regulatory/width and politico-economic/finality aspects



Source: Authors’ elaboration.

of policy goals – regardless of which politico-economic lenses they may use to interpret them – and they tend to make the most of discretion-as-granted towards these goals.

As for the politico-economic aspect, its nature is deontological in both Figure 3 and Figure 4. Nevertheless, a continuum proposition holds strongly across its themes where separation is not clear. Codes under the *avoid moral hazards* and *expand policy coverage* themes are relativized in many respondents' accounts. In effect, it sounds reasonable that when officials operating selective social security policies advocate for the expansion of policy coverage, they are also concerned about moral hazard. Nevertheless, prevailing codes are related to these concerns, indicating distrust towards the clientele. Explanations can be manifold, but the data highlight two of them. First, intricate/strict selectivity rules can invite fraud. For instance, income limit rules are too strict while being blinded to informality. Second, intermediaries, aware of system loopholes, can optimally tweak benefit applications to increase the odds of granting. Thus, there seem to be concrete grounds for respondents' distrust regardless of any strong moral perspectives. Furthermore, being accountable for errors in the granting of benefits, officials can be suspicious about clients despite being sympathetic to their vulnerability. Thus, they often might find themselves trapped in a dilemma, between being responsible for a police-like investigation and the benevolent interpretation of rules and procedures.

Furthermore, clerically oriented officials might exert less deliberate influence over policy outcomes, while professionally oriented officials might exert more, according to their politico-economic perspectives. This points to three ways of decision making and three corresponding ideal-typical role identities: i) strict/algorithmic rule application (clerically oriented officials), ii) police-like investigation (professionally oriented officials aiming to avoid moral hazard) and iii) benevolent rule interpretation (professionally oriented officials aiming to expand policy coverage). Despite the canonical nature of INSS officials' activities, this elaboration matches the “three pathologies” theory, which presents professional bureaucrats' attitudes towards clients under three different ideal-typical roles/orientations: “the indifferent (people processing)”, “the enforcer (regulation)” and “the caregiver (service provision)” (Zacka, 2017, pp. 66, 88).

Nevertheless, the unclear separation between police-like investigation and benevolent rule interpretation can also signal variations according to officials' perceptions of a client's welfare deservingness (van Oorschot, 2000). These officials might advocate for broader rules for the granting of benefits, but only if they view the specific client as deserving of state aid based on one or more deservingness criteria. According to them, people are perceived as more deserving according to i) the less control they have over their situation, ii) the better their behaviour in society, iii) the more they reciprocate to receive

benefits, iv) the more they share a common identity with the perceiver, and v) the greater their apparent need (de Andrade and Pekkola, 2022; van Oorschot, 2000; Laenen and Roosma, 2021). Thus, overlapping moral hazard avoidance with policy coverage expansion can suggest underlying deservingness preferences. For instance, officials could assess social assistance clients' deservingness of benefits based on how they seem to have contributed to society before – a reciprocity-based deservingness judgment. Such an understanding could arise from a spillover effect, as most of the decisions made by INSS officials concern contributory insurance-based systems that are fundamentally different from social assistance (CGU, 2024).

Conclusions: Clerical and professional dilemmas

This study draws upon street-level bureaucracy and discretion theories (Brodskin, 2011; Buffat, 2015; Evans and Hupe, 2020; Gofen, 2014; Hupe, 2013; Lipsky, 2010; Thomann, Van Engen and Tummers, 2018) to develop a practical model for analysing Brazilian social security clerical bureaucrats' perceived discretion scope. We rely on INSS officials' answers ($n = 486$) to an open survey question concerning the challenges they face when deciding on whether to grant/deny social assistance benefits. We analyse these answers through open, reflexive coding, followed by directed content/code co-occurrence analysis based on the proposed discretion scope model. The results indicate perceived discretion heterogeneity, suggesting a backdrop of competing role identities under a socio-regulatory/discretion width aspect. That is, although subject to similar regulatory, managerial and contextual constraints, INSS officials can be either clerically oriented or professionally oriented. In turn, the politico-economic/finality aspect analysis suggests a mixed continuum of understandings concerning varied policy goals and priorities (cf. Evans and Hupe, 2020; Hupe, 2013). Furthermore, we propose that the perceived discretion scopes reflect three ideal-typical role identities: strict/algorithmic rule application, police-like investigation and benevolent rule interpretation. These identities are in agreement with Zacka's (2017) three pathologies (the "indifferent", the "enforcer" and the "caregiver") and make it harder to distinguish between workers who are accorded the formal status of being professionals or public service clerks in the ways they deal with discretion.

This research makes a significant contribution to the literature by addressing the often-overlooked issue of the discretion used by (conventionally) non-professional, clerical bureaucracies. Its importance is paramount in the implementation of social security systems, especially in developing economies (see Campos and Peeters, 2022; Lotta et al., 2022). Our findings and proposed framework provide valuable insights for policy makers and managers overseeing reforms in large

social protection systems, where reliance on public service clerks is common (e.g. Jacobsson, Wallinder and Seing, 2020; Keiser, 2010). In the specific context of the INSS in Brazil, our study provides a novel account of the level and direction of the impact officials can have on decisions regarding social security benefits, a vital input for revising procedures, internal norms and training and hiring standards. Furthermore, our work contributes to the broader development of adapted theoretical models that can be applied to assess the discretion of clerical workers in diverse social security contexts.

This study has two data-related research limitations. First, responses were gathered during the COVID-19 crisis; although no survey answers referred to the pandemic and officials' activities were not interrupted, its effects cannot be ruled out. Second, the data used in this study were cross-sectional, meaning that perceived discretion scopes, and thus proposed role identities, might not be static but might reflect officials' contingent position in the need to solve a trilemma between the orientations defined by Zacka. Similarly, under Zacka's (2017) framework, professionals assuming one of the proposed roles also act under other orientations according to the situation. These ephemeral orientations, or "modes of appraisal", can, by iteration, affect professionals' "durable patterns of psychological continuity" or their "moral dispositions" (Zacka, 2017, p. 90). Accordingly, INSS officials floating between social insurance and social assistance policy logics are frequently exposed to situations demanding opposite orientations. These can make the orientation trilemma harder to solve and roles fluid – different fleeting organizational incentives and external factors pushing officials in different directions. Finally, the absence of external institutional anchoring, which formal professionals typically enjoy due to occupation-related institutions, can further enhance the fluidity of clerical officials' roles. These limitations call for more in-depth qualitative research and longitudinal approaches.

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Supporting information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Developing long-term care insurance in China: A review of structure, impact and future directions

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Abstract Since 2016, China has established long-term care insurance (LTCI) in the form of pilot projects that now extend to almost 50 cities. The need for long-term care is likely to increase significantly. This article looks at initial studies undertaken in a range of cities on the impact of the LTCI pilots on health and the use of health care, on income, poverty and consumption, informal care and labour force participation. It reviews policy assessments that have identified gaps and challenge in the provision of LTCI. The article concludes with possible next steps in developing LTCI in China drawing on national and international experiences.

Keywords long-term care, social insurance, social security planning, China

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Introduction

China, like many other countries, is at an early stage in the development of long-term care (LTC) policies. Although LTC has existed in China for many decades – in different forms and under various authorities (Luk, Zhang and Yuen, 2022, chapter 3) – it was only in 2016 that the country established long-term care insurance (LTCI) in the form of pilot projects in 15 cities. These pilots have since been extended to now almost 50 cities.

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This article looks first at initial studies on the pilot projects in relation to their impact on health and the use of health care, on income, poverty and consumption, informal care and labour force participation. It then considers overall policy assessments that have identified gaps and challenges and reflects on what further information would be needed to properly assess and expand LTCI. We conclude with some possible next steps in developing LTCI in China drawing on national and international experiences.¹

The need for care and LTCI pilot policy

Given the process of population ageing and changes in the demographic structure in China, the need for long-term care (LTC) and the associated costs of providing this are likely to increase significantly in the next decades. A recent World Health Organization (WHO) study (Costa-Font and Raut, 2022) found that the availability of informal care has decreased in recent decades (especially care provided by children or grandchildren) while the proportion of people with unmet LTC needs has risen continuously. The same study projected that care needs will continue to rise in the coming decades, given the ageing of the population, while the supply of informal care will continue to decline, given demographic trends. This will create further pressures to develop a formal LTC system.

The Organisation for Economic Co-operation and Development (OECD, 2015) has estimated that the ratio of public LTC expenditure to GDP in China will increase by 0.4 percentage points to reach 0.5 per cent of GDP in 2030. In comparison, for OECD Member countries, the increase in LTC spending is projected to be, on average, 0.6 percentage points, to reach 1.4 per cent of GDP in 2030. There have also been a number of more recent unofficial estimates in China. For example, Li and Otani (2018) find that ageing will double LTC expenses by 2030. Utilizing Chinese Longitudinal Healthy Longevity Survey data (CLHLS), Jin et al. (2023) project that the percentage of older adults with disabilities will rise from 7.5 per cent in 2020 to 9.6 per cent in 2050. The total LTC cost for home-based and community-based services are projected to increase from 0.7 per cent of GDP in 2020 to 6.4 per cent of GDP in 2050.

Chen et al. (2018) identified important gender issues in care needs, issues which are not always discussed in the detail they deserve. Their study found that women (aged 60+) are 7.6 per cent more likely than men to have care needs and

1. The focus of this article is on LTCI. For broader issues in relation to elder care in China, see World Bank (2018) and the 2023 special issue of the *Journal of Aging & Social Policy*. The Central Committee of the Communist Party of China and the State Council recently published the *Opinion of the CPC Central Committee and the State Council on Deepening Reform and Development of Elderly Care Services*, 30 December 2024 (available [here](#)). The *Opinion* states that the government will play a leading role in developing elder care but also that market mechanisms will be relied upon to develop relevant sectors.

29.3 per cent more likely than men to have unmet needs; and that most of the gender gap in unmet needs is explained by the existence and health status of a spouse. The study also found a sharp gender division in patterns of family care in China in that, while men are more likely to receive care from their wives, women are primarily cared for by their children. Marital status and spousal need for care also affect the provision of care, with care-needing women who have healthy husbands less likely to receive care than care-needing men with healthy wives.

In response to these challenges, in 2016 the Ministry of Human Resources and Social Security (MHRSS) issued a policy directive, *Guiding Opinions on Piloting the Long-Term Care Insurance System*.² The objectives of the directive were to explore the establishment of a social insurance system to provide financial support or services to long-term disabled persons for basic care for daily living and closely-related medical and nursing care, and to use the pilot experience to develop a LTCI policy framework (see World Bank, 2019; Gruat and Chuan, 2021; Luk, Zhang and Yuen, 2022).

Following an initial period of implementation, in 2020 the National Healthcare Security Administration (NHSA), which had taken over responsibility for the policy direction of LTCI, and the Ministry of Finance jointly issued *Guiding Opinions on Expanding the Pilot Program of the Long-term Care Insurance System* (Health Insurance Administration, 2020a).³ This short policy directive, which is aimed at the governments of provinces, autonomous regions and municipalities, is short on detailed objectives and focuses on the mechanics of providing LTCI. However, further context is provided in a “policy interpretation” of the *Opinions* (Health Insurance Administration, 2020b).⁴ This sets out a number of basic principles for expanding LTCI:

“First, adhere to the people-oriented approach and focus on the long-term care and insurance issues for severely disabled people that the people urgently need to solve. The second is to insist on independent operation and promote independent system design and independent advancement. The third is to adhere to basic insurance and strive to meet the basic long-term care insurance needs of the people. The fourth is to adhere to shared responsibilities and reasonably divide financing responsibilities and guarantee responsibilities. The fifth is to persist in mechanism innovation, explore operating mechanisms for sustainable development, and improve guarantee efficiency and management levels. Sixth is to adhere to overall planning and coordination and do a good job in functional connection with relevant social security systems and commercial insurance to form a joint insurance force” (Health Insurance Authority, 2020b).

2. These are described in more detail in World Bank (2019).
3. The *Guiding Opinions* are available [here](#).
4. The full “policy interpretation” document is available [here](#).

Table 1. 2020 *Guiding Opinions*

Issue	Guiding Opinions
Coverage	People insured by the employee basic medical insurance and, if conditions permit, urban and rural residents
Beneficiaries	Giving priority to qualified disabled older people and severely disabled people who have undergone standardized diagnosis and treatment by medical institutions or rehabilitation institutions, whose disability has lasted for more than 6 months, and who have passed the assessment upon application
Benefits	Meeting the basic nursing and care needs of severely disabled people including institutional and home and community care services. For care services, payment level is generally at around 70 per cent
Funding	Establishing a multi-channel financing mechanism but initially the main source of funding is from basic medical insurance contributions though several pilots provide fiscal subsidies
Management	The management of LTCI funds is to be implemented with reference to the current relevant systems of social insurance funds but funds must have separate accounts
Implementation	Introducing "social forces"* to participate in LTCI services. Simultaneously establishing performance evaluation, assessment incentives and risk prevention mechanisms

Note:* Formally, non-state and non-commercial organizations, though the lines can be rather blurred.
Source: Health Insurance Authority (2020a).

The approach of the 2020 *Guiding Opinions* is generally in line with that of the first round of pilots (Table 1).

The LTCI pilots marked a shift in policy in that they focused largely on the demand side of LTC and on ensuring that people who needed care had access to services. This contrasts with existing policy measures, which have been focused mainly on the supply side and on the development and regulation of LTC services.⁵

The guidelines leave considerable scope to implementing cities as to their specific approach, which is set out in provincial or municipal guidance. The most recent National Healthcare Security Development Statistical Bulletin states that, in 2022, a total of 169.9 million people were insured under LTCI in the 49 pilot cities, and 1.2 million people enjoyed benefits. In 2022, fund income was 24.08 billion Chinese yuan (CNY), and fund expenditures were CNY 10.44 billion. There were 7,679 designated long-term care insurance service institutions with 331,000 care staff.⁶

The World Bank (World Bank, 2019; see also Feng et al., 2023) described the different approaches adopted by the first 15 pilot cities and Li et al. (2024) provide an overview for the now 49 pilot cities. In line with the *Guiding*

5. See the 2024 press release by The State Council, *China vows to strengthen elderly care services*.
6. All data are available in the *Statistical Bulletin* (in Chinese).

Opinions, all cover those insured under the Urban employee basic medical insurance (UEBMI) and most relied on UEBMI funds to fund LTCI. However, some cities also covered people insured under the Urban-rural resident basic medical insurance (URRBMI). In addition to UEBMI, cities relied on individual contributions, employer contributions, government contributions and, in some cases, funding from public welfare lotteries (Li et al., 2024, Table 2). There is also variation in relation to other criteria such as the level of reimbursement, with some cities providing more than 70 per cent of costs (excluding board and lodging expenses) and others less. Li et al. (2024) also found that, in addition to the care-need requirement mentioned in the *Guiding Opinions*, cities imposed additional requirements such as enrolment duration, premium payments and waiting periods. For instance, some cities required a one-year waiting period after premium payment for first-time participants or those who had interrupted their participation for more than six months.

In terms of the services provided (or rather intended to be provided on the basis of their policy), Li et al. (2024) found that 28 of the 49 pilot cities provided LTC only to people with severe disabilities, excluding those with moderate or mild disabilities. Only four cities (Shanghai, Suzhou, Jinan and Zibo) provided community-based and home-based care service options addressing all levels of disability.

The impact of LTCI

China has not had a culture of public and rigorous evaluation of social policies. In 2019, a World Bank Technical Paper was able to say – correctly – that:

“There is a dearth of rigorous evaluation of the impact of the LTCI pilot programs on the insured population in terms of access to long-term care services, quality of care provided, and cost of care. The potential impact of LTCI on the utilization and costs of health care services, particularly hospital-based acute care, is unknown” (World Bank, 2019, pp. 1–13).

While it remains the case that, in many areas, the impact of LTCI remains unstudied, there are now over 30 published studies (in English) of its impact on health and the use of health services with further (albeit fewer) studies on issues such as the impact on income and consumption, informal care and labour force participation.

Studies can broadly be grouped into i) quantitative studies which look at the overall impact of LTCI on a specific issue (or issues),⁷ and ii) policy assessments

7. For a review of the limited earlier studies, see Chen et al. (2021).

which look at all pilots or at specific cities. The quantitative studies generally rely on the China Health and Retirement Longitudinal Study (CHARLS) (2011–2018) or the Chinese Longitudinal Healthy Longevity Survey (CLHLS) (1998–2018), although some use local administrative data. Some of the policy assessments cover a wide range of cities, focusing mainly on an assessment of policy documents, while a small number use mixed methods to evaluate policy in specific cities.

Quantitative studies

Self-reported health and mental health

Studies have reported a positive impact on different aspects of health.⁸ Key findings include that LTCI:

- improved the self-reported health of the covered population (Liu and Hu, 2022; Luo et al., 2024; Tian et al., 2024; Wang, Guan and Wang, 2023; Ye, Hu and Lin, 2023; Yi et al., 2023; Zhang, Chen and Wang, 2023);⁹
- improved life satisfaction (Luo et al., 2024; Zhang, Chen and Wang, 2023);
- improved cognitive functioning (Wang, Guan and Wang, 2023; Ye, Hu and Lin, 2023);
- reduced disability (Cao, Shi and Pan, 2023) and reduced the number of painful body parts (Yi et al., 2023).

Lei et al. (2022) concluded that LTCI has reduced the likelihood of older adults reporting unmet care needs for activities of daily living, the intensity of informal care, and the amounts of care expenditures related to activities of daily living as well as out-of-pocket medical expenditures. LTCI coverage was also associated with an improvement in self-reported health and a reduction in the one-year mortality risk of older adults with a need for care.

Specifically on the issue of mental health (happiness and depression), Li and Wang (2024b) found that LTCI improved the degree of life satisfaction of middle-aged and older people. Chen and Zhao (2023) concluded that LTCI improves older adults' happiness and reduces depression symptoms and also reported that LTCI coverage improves carers' physical health and social activities, reflecting its welfare spillover effects (see also Lei et al., 2022). Wang (2024b) concluded that LTCI improved the mental health of older adults by reducing medical expenses and increasing daily companionship and social interaction. Fan et al. (2023) concluded that LTCI improved subjective well-being among older

8. For a review of earlier studies, some of which pre-date 2016, see Chen and Xu (2020) who also find that LTCI has a positive effect on the health and life quality of disabled older people.

9. Liu et al. (2023) also found that LTCI enhanced the self-reported health of covered residents; however, the study found that this effect may only be statistically significant for the urban group.

persons with a disability and this effect increased over time. This study found that the LTCI programme has greater positive effect among women and those who lived alone.¹⁰ Tang et al. (2022) also found that LTCI has improved self-rated health, the activity of daily living and mental health.

Other studies also identified positive spillover effects for spouses or carers. LTCI was found to improve the physical health status of spouses of people with disabilities, with the beneficial effects on physical health being stronger for spouse carers and spouses with lower-level education and lower household income (Yi et al., 2023). Luo et al. (2024) found that LTCI reduced the depressive scores of spouses of people with functional limitations. Jiang and Yang (2023b) also found that spousal carers of disabled people, particularly male, rural and eastern spousal carers, experienced positive health spillovers after the implementation of LTCI.

These studies, which used CHARLS/CHLHS data, were supported by studies using administrative data in Chengdu, where Zeng et al. (2024) found that LTCI reduced the mortality rate in older adults with a disability and extended survival time and Zhou et al. (2023) showed that the LTCI group in an LTC institution had a higher survival rate compared with the non-LTCI group.

Thus, there is almost unanimous support for a positive impact of LTCI on self-reported health¹¹ and, in the limited studies where data is available, on survival and mortality rates. For the studies that examined the issue, some positive spillover effect on spouses and carers were also found.

Use of health services

There is a similar consensus in relation to the positive impact on the use of health services. Chen and Ning (2022) found that LTCI reduced the number of outpatient visits, the number of hospitalizations and the length of inpatient stay. They also concluded that LTCI reduced the inpatient (and total) out-of-pocket expenses but did not impact on outpatient out-of-pocket expenses. Feng, Wang and Yu (2020) concluded that LTCI reduces the length of stay, inpatient expenditures, and health insurance expenditures in tertiary hospitals by 41.0 per cent, 17.7 per cent, and 11.4 per cent, respectively, with a greater effect on people older than age 80. Outpatient visits in tertiary hospitals decreased by 8.1 per cent per month after LTCI. Broadly in line with this, Yang et al. (2023b) found that LTCI had reduced the number and costs of annual hospitalizations

10. Only Yi et al. (2023), who otherwise found a positive impact on health, found that the impact of LTCI on the depression index was ambiguous.

11. Luo, Yang and Li (2023) find that LTCI has an improvement effect on self-reported health status, but the results are not statistically significant.

but had a non-significant effect on outpatient services. Luo, Li and Yang (2023b) found that LTCI reduces out-of-pocket medical expenses and the number of inpatient visits but has no significant impact on the number of outpatient visits. It was found that LTCI has a positive effect on the number of inpatient visits for the rural population, but not the urban population. Lei et al. (2022) also found that LTCI has curtailed medical expenses.

Tang et al. (2022) concluded – partially in contrast to these studies – that LTCI has reduced use of both outpatient and inpatient services and cut outpatient and inpatient expenses. Liu and Hu (2022) also found that LTCI reduces outpatient expenses, inpatient expenses and the length of inpatient stay of older people.

Deng et al. (2022), looking at CHARLS data for Jingmen, found that the impact of LTCI varied between urban and rural areas. The annual expenditure for and frequency of use of inpatient services in rural areas were reduced, which were lower than those in urban areas. The monthly expenditure and the frequency of the need for outpatient care in rural areas were reduced but increased in urban areas.

The only area where some divergence arises appears to be in the impact on outpatient services. Ma and Xu (2022) found that LTCI reduced out-of-pocket medical expenses by over a third (37.2 per cent) per year and improved self-rated health (see also Feng, Wang and Yu, 2020). However, as noted above, some studies found that the impact on outpatient services was unclear. Nonetheless, given that outpatient services are significantly cheaper than inpatient services, the overall impact on health-related costs appears to be positive (cf. Chen and Ning, 2022).

The above studies, which used national data, are supported by a specific study using hospital data in Chengdu. For that city, Liu, Ma and Zhao (2023a) found that LTCI reduced the occurrence of pulmonary and urinary tract infections-related hospitalizations in older people with a disability, with stronger influences observed over an extended period of implementation. In Qingdao, Lu et al. (2020) analysed administrative data to show that the use of long-term care reduces the probability of using hospital inpatient service by 12 per cent.

Interestingly, Fu (2022) found that LTCI increased people's confidence in receiving future professional help with basic personal care in activities of daily living, which perhaps explains some of the findings in relation to consumption and savings.

Income, poverty, consumption, informal care and labour force participation

There is a general consensus in the studies that LTCI has had a positive impact on income and consumption and reduces poverty. Li, Ke and Sun (2023) concluded

that LTCI reduces the multidimensional poverty of middle-aged and older adults and their likelihood of future multidimensional poverty. LTCI coverage was also associated with a reduction in the likelihood that middle-aged and older adults in need of care fall into income poverty, living consumption poverty, health poverty, and social participation poverty.

Liu and Hu (2022) found that LTCI increases the income of low-income people while Wang, Zheng and Li (2024) found that LTCI has a positive impact on consumption levels, including total and per capita consumption within older households. Liu, Ma and Zhao (2023a) also examined consumption and found that LTCI has led to an increase in the non-health consumption of older people households by 15.7 per cent, mostly in households having no older members needing LTC. Effects are stronger for households with higher expected LTC risks, less wealth or family insurance, and covered by more generous schemes. Overall, the authors suggest that these findings offer empirical support for the role of LTCI in mitigating precautionary savings against LTC risks.

Informal care. There are fewer studies on the impact on informal care and a small degree of divergence in the findings. Chen and Ning (2022) found that, as one might intuitively expect, LTCI led to a reduced probability of receiving care from family members. Pei, Yang and Xu (2024) came to a similar conclusion, finding that LTCI substantially alleviates the burden on informal carers, leading to a reduction in care work of 8.5 hours per month. Han, Liu and Zheng (2023), whose main focus was on the impact on labour supply, found that LTCI increases spousal labour supply by reducing informal care hours.

In contrast, Cao and Xue (2023) found a 7.2 per cent rise in family care under the LTCI system and concluded that LTCI is more likely to promote family care, in a relative sense, as the primary source of care for disabled women, disabled people aged 60–74, and those who cannot fully take care of themselves. They found that the formal care support policy of LTCI will “crowd in” both formal care and family care, and the crowding-in effect on formal care may even obscure the crowding-in effect on family care. Unfortunately, these more-or-less contemporary studies could not provide comment on their apparently inconsistent findings, so it is not clear whether there is a real divergence or whether this arises from different data or methodological approaches. Although not looking specifically at LTCI pilots, Liu (2021) (using data from the China Health and Nutrition Survey – CHNS) does provide some support for the Cao and Xue (2023) view that formal care “crowds in” informal care. Liu found that formal care promotes the growth of informal care levels because the complementary effect of formal care is higher than the substitute effect of formal

care. Clearly, the impact of LTCI on informal care is an issue which deserves careful attention.

Labour force participation. Many of the studies on informal care also looked at the impact on labour force participation and the general conclusions here are in line with the majority of findings that LTCI reduces informal care. In other words, studies find a positive impact on labour force participation. Han, Liu and Zheng (2023) found that LTCI increases the probability of spousal labour force participation by 3.4 percentage points and increases the hourly income of paid employment. LTCI increases spousal labour supply by reducing informal care hours (substitution effect) and suppresses spousal labour supply by providing a stream of non-wage income (income effect). The effect is larger if it covers only the severely disabled, and if LTCI provides benefits-in-kind services. Similarly, Pei, Yang and Xu (2024) found that LTCI markedly increases labour market participation while Zhu (2024), utilizing provincial level data, found that LTCI stimulates female employment.

There are a number of caveats in relation to these studies. First, they come at an early stage of policy implementation with the most recent published studies still using 2018 data (thus, only 1–2 years after policy was implemented; albeit that some cities such as Qingdao had pre-existing local policies).¹² Second, due to data issues it is not possible to evaluate all pilot cities and some studies, for example, rely on data from as few as six cities. Third, national survey data does not generally allow identification of actual LTCI beneficiaries, and the studies focus on people who should be eligible. Finally, the LTCI pilot cities are generally those with ageing populations, such as Shanghai and Qingdao, with higher levels of economic development and more-developed elder care services. Studies have, of course, tried to take into account these limitations in assessing policy impact. Overall, however, that there is general agreement in terms of the impact identified on issues such as self-reported health and use of health services – and the fact that these findings are supported by studies using local administrative data – enables to state with some confidence that the effects identified are genuine and not a statistical artifact.

Public opinion

There are a small number of studies that consider public opinion about LTCI. Peng et al. (2022) found that more than 60 per cent of respondents in Guangzhou gave a

12. CHARLS data for 2020 is now available, but even this will not allow any assessment of the second wave of pilots.

positive evaluation of the LTCI pilot programme while Zhang and Yu (2019) found that 72.2 per cent were satisfied with the outcomes and performance of the LTCI policy in the pilot cities. However, only Zhang and Yu (2019) focused on those specifically covered by LTCI and it is difficult, in this context, to assess whether any particular level of satisfaction is good or bad.

Policy assessment

Luk, Zhang and Yuen (2022) carried out a detailed study of the first phase of LTCI in China, drawing on the detailed case studies of three cities (Nantong, Qingdao and Shanghai). They looked in particular at how effective LTC was in these cities under the criteria of utilization of medical resources, cost, equity, quality of care and sustainability. Overall, the study was broadly positive about the early experience and supported the choice of initially covering persons already insured under UEMBI and financing LTCI from existing insurance funds, as this approach allowed the rapid implementation of LTCI. However, in the longer term, the study highlighted issues concerning the sustainability of funding given that reliance on UEBMI funds was likely to be insufficient given other demands made of these funds. Also of concern were issues of equity both in terms of people covered (those covered were likely to be better off than those not) and cost. Further highlighted were issues related to the availability and quality of services and inequality of access to services (e.g. people in rural areas normally have poorer access). Generally, the authors were optimistic that China would succeed in achieving universal LTCI coverage. However, as shown in other studies (see below), the three cities selected appear to be amongst the “best” in terms of implementation, suggesting that the overall assessment may be biased upwards.

Li et al. (2024) have undertaken one of the broadest LTCI policy assessments based on policy documents in all 49 pilot cities. They concluded that the overall pilot effect regarding LTCI was favourable, although there were significant regional disparities. In most of the pilot cities, LTCI policies were designed to alleviate both the financial burden and the burden of caring for people with disabilities that families faced. However, some challenges still remained, such as the lack of community-based and home-based care services, the need to expand insurance coverage, and the importance of diversifying funding sources.

To identify the key challenges to achieving an equitable nationwide long-term care system for older people, Lobanov-Rostovsky et al. (2023) offer a systematic review of the literature¹³ published since the introduction of the second pilot phase. Four issues were identified: poor quality of service provision, widespread

13. Studies in English and Mandarin published between June 2020 and June 2022 were reviewed.

preference for family care, inequitable distribution of the cost burden, and varying LTCI eligibility.

Peng et al. (2022) assessed 14 of the initial pilot cities (excluding Shihezi for data reasons), again based on policy documents, by constructing a policy modelling consistency (PMC) index intended to measure policy strength (ranging from 0–1). The results showed considerable variation between cities, with Qingdao, Nantong and Shanghai being the highest in terms of policy strength ($PMC > 0.8$), and Anqing, Qiqihaer, Chongqing, and Chengdu being the lowest ($PMC < 0.6$). The main policy weaknesses identified in the study were LTCI coverage, the sources of funds, the scope of care services, and benefit eligibility.

Other earlier studies that looked at the initial 15 cities on the basis of policy documents are those of Zhou and Dai (2021) and Dai et al. (2022). The former identified “many inconsistencies in long-term care policies across local areas, leading to substantial variations in services to the beneficiaries, funding sources, benefit package, supply options and partnership working” (Zhou and Dai, 2021). Dai et al. (2022) found “evidence of fragmentation in the LTCI design in the 15 pilot cities with respect to its coverage, eligibility, funding, benefits, and reimbursement rates and caps”.

More specific studies have been carried out in a number of individual pilot cities from the first phase including Chengdu, Nantong and Qingdao. For Chengdu, Zhang and Miao (2022) carried out a cost-benefit analysis of LTCI expenditure and benefits using official data from the Chengdu municipal government and their own assessment of benefits. They found that LTCI in Chengdu provided net benefits to society, institutions, in-home care providers and care recipients (as estimated benefits exceeded costs).¹⁴ Furthermore, the benefits of LTCI for insured households are relatively stable and less likely to result in income losses due to changes in various expenditures or benefits. Additionally, the initial set up cost of LTCI in Chengdu was relatively low, and the long-term benefits are incremental, resulting in increasingly large net benefits over time.

Guo and Li (2022) provide a very positive assessment of the Nantong pilot based on interviews and analysis of official local data. Unusually, this study looked in detail at financial expenditure and projected future expenditure. It found that, on the basis of the current system, the total expenditure on LTCI would peak in 2055 at a modest 0.33 per cent of Nantong’s GDP, albeit four times the 2020 level of 0.085 per cent of GDP.¹⁵ This scenario is mainly attributable to the promotion of home care with fixed subsidies as well as the capping and

14. The authors noted limitations in data availability, which required various estimations.

15. This estimate, calculated by the Nantong municipal statistics bureau, seems very low given that this is about the current level of LTCI expenditure in Taiwan (China). On the Taiwanese system, see Chen and Fu (2020) and Yang, Hsueh and Wei (2020).

settlement of institutional care to force care institutions to move from treatment to health maintenance. The study concluded that the Nantong model effectively disperses institutional risks by means of horizontal and vertical transfer payments, diversified financing and service outsourcing, thus achieving its dual goals of full coverage and financial sustainability in the long run. It is interesting to note that the positive assessment for Nantong is broadly in line with the overall rating of Li et al. (2024).

For Qingdao, which has one of the longest established LTCI systems and is also highly rated by Li et al. (2024), Chang, Yang and Deguchi (2020) came to more nuanced conclusions. Analysing national and local statistics on population, service type and capacity, they found considerable discrepancies in terms of access to services among LTCI beneficiaries. Poorer service users were more likely to choose nursing home care with lower costs, albeit these services might be of poorer quality. Demand for home-based services is high, but these services are not distributed according to population needs and are not available in some districts with high concentrations of older people. Consequently, a large proportion of disabled older people have no access to home-based services. These conclusions are partly consistent with those of Luk, Zhang and Yuen (2022) who found that urban employees enjoy better coverage and reimbursement rates than rural residents and that care recipients in urban areas have better access to LTC facilities and services than their rural counterparts. They also found that there was room for improvement in the quality of care and financial sustainability of LTCI in the long run.¹⁶

Han and Shen (2022) examine four LTCI pilot cities in three northeastern provinces (Jilin, Heilongjiang and Liaoning) on the basis of interviews with stakeholders. They found that i) the coverage of the system is narrow and that disability assessment criteria are fragmented (also a conclusion of Li et al. 2024); ii) that the substance of service provision is lacking, both in terms of precision and dynamic adjustment mechanisms; iii) that socialized care synergy cannot be achieved and informal care is lacking policy support; iv) there is an over-reliance on medical insurance funds and that unfair financing standards are applied; and v) that economic and social development is insufficient to cope with ageing needs and uncertain risks.

As mentioned above, the financial sustainability of LTCI is likely to be a key issue given demographic trends. Studies have looked at this issue both from an actuarial and a policy analysis perspective. The results vary by location given differences in demographic pressures and in the scope of LTCI pilots. Overall, however, it is clear that expenditure will increase significantly. Zhang, Fu and Fang (2020) found that, from 2020 to 2050, the financial needs of long-term care

16. See also Tian (2023).

for disabled older people in China would increase, especially in urban areas, and the per capita financial demands in rural areas would increase significantly (see also Xu and Chen, 2019).¹⁷ The study concluded that the overall contribution rate of LTCI in China would increase sharply from 1.5 per cent of income in 2020 to 5.1 per cent in 2050, an increase of about 340 per cent. In line with these conclusions, policy studies tend to highlight the fact that reliance on medical insurance funds (which are already under enormous pressure)¹⁸ is unlikely to be sufficient in the longer term, thus the need to diversify funding sources (Luk, Zhang and Yuen, 2022; Peng et al., 2022; Li et al., 2024).

These assessments based on policy documents (and in some cases a wider range of data) are very useful, but they suffer from the limitation that policies “in practice” may not be as intended “on paper”. Thus, we do not know to what extent people are aware of or, indeed, can access services, whether services exist or the quality of these and, in most studies, very little is said about management and funding issues. While these issues are considered to a limited extent in the city studies and in Luk, Zhang and Yuen (2022), absent is a comprehensive evaluation of LTCI (using both qualitative and quantitative tools). Moreover, due to different methodologies, it is difficult to compare the findings of these assessments.

Conclusions and future directions

Impact

The quantitative evaluations of the impact of the LTCI pilots support the view that they represent a very positive first step in developing LTC in China. The quantitative studies of the LTCI pilots indicate a positive impact on self-reported health (including mental health) and a reduction in the use of health care (especially costly inpatient care). They suggest a positive impact on income and poverty while also suggesting that the existence of LTCI frees up household resources to allow for higher domestic consumption. While the impact on informal care requires further study, the research generally indicates that LTCI leads to increased female labour force participation.

The policy assessments are also generally positive about LTCI (albeit more subjective and more selective in that none is able to carry out a comprehensive

17. Zhang, Fu and Fang (2021) found that while both revenue and the expenditure of the LTCI funds in Xiamen will increase year by year from 2020 to 2030, expenditure would increase at more than double the rate of income. See also Xu, Li and Mi (2024) who highlight the need for costings to be updated in the light of increasing longevity drawing on the case of Zhejiang.

18. See Wu et al. (2023) who highlight the fact that population ageing will increase the expenditure and reduce the income of the medical insurance funds and conclude that “China’s current healthcare financing scheme will face enormous challenges”.

assessment over time). However, a number of limitations are identified by the policy assessments of LTCI, as well as by a smaller number of quantitative studies.

First, most studies suggest that the financial basis for LTCI has to be strengthened and (probably) delinked from the social health insurance schemes (Li et al., 2024).

Second, the studies indicate that access to services is inequitable (Zhu and Österle, 2019; Chang, Yang and Deguchi, 2020; Luk, Zhang and Yuen, 2022; Li et al., 2024). In general, those entitled to services are better-off urban residents while (generally poorer) rural residents have limited (or no) access either because they are not covered or because services are much more limited in rural areas.¹⁹ Some studies also suggest that people with mental disabilities are less likely to be able to access LTCI (Zhu and Österle, 2019).

Third, home-based and community-based services are underdeveloped and require more recognition, planning and investment (Chang, Yang and Deguchi, 2020; Li et al., 2024).

Fourth, and related to the preceding points, LTCI services are not distributed according to the need for care. Chang, Yang and Deguchi (2020), for example, suggest that a resource allocation formula be introduced in China to take account of factors such as population ageing, changes in the demographic structure and the need for care in the geographic distribution of resources.

Fifth, LTCI costs will rise significantly in the coming decades and there is a need to plan for the use of a more diverse range of funding sources as medical insurance alone is unlikely to be sufficient.

Sixth, several studies have identified staff shortages and levels of expertise as being an important constraint in the provision of LTC (Yang, Huang and Yu, 2023; Luk, Zhang and Yuen, 2022).

Finally, disability assessment standards are not standardized, varying from area to area.²⁰

Future study and policy directions

To more fully assess LTC provision, much further work needs to be done, including clarifying the projected costs involved over the coming decades and the

19. Yang, Huang and Yu (2023) drawing on broader LTC data (not confined to the pilots) found similar inequalities and an urban-rural split.

20. NHSA and the Ministry of Finance have issued several Notices on “Measures for the Administration of Disability Level Assessment of Long-term Care Insurance (Pilot)” (Medical Insurance Regulations [2023] No. 29 ([here](#)) and [2024] No. 13 ([here](#))). The “policy interpretation” (available [here](#)) accompanying the 2023 Notice states that the rationale for the notice includes that “the evaluation [of disability] varies greatly and the evaluation management is not standardized enough”.

appropriate level of responsibility between the different levels of government. Given that the existing studies look at an early stage of implementation and cover (at most) the initial 15 pilots, wider study of the impact on health costs and use of health services is clearly required. In addition, further study is required on the impact of LTCI on income and poverty and on both formal and informal care.

Clearly, quantitative assessments can only go so far. Without combining these with more qualitative assessments, it will be difficult, for example, to establish different approaches to LTCI provision (in “practice” rather than on “paper”) and to identify links between different approaches and outcomes. It would be useful to have more comparative research of the pilot cities to identify what works best in different contexts. As noted, pilot cities have considerable discretion in the implementation of guidelines. Despite studies often referring to different “models” of provision, it is less than clear that approaches are sufficiently distinctive to form separate models or, if they are, how to cluster cities. Nonetheless, there are issues such as funding, service-mix (e.g. reliance on home versus institutional care), and level of reimbursement which could usefully be examined empirically to see what works. For example, is the coverage provided in cities that are also home to people covered by the URRBMI (mainly rural workers) better than the coverage provided in cities with people covered only by UEBMI? Which forms of administration work best? To what extent are people in need or care covered in practice and are there issues of under- and over-inclusion (or, more realistically, how large are these issues)?

A further issue is financial sustainability and sources of funding. While the 2020 Policy Interpretation does call on municipalities “to scientifically determine the level of financing”, the current system of financing encourages local governments to take a short-term view (1–3 years) of funding requirements (Cousins, 2021). In order to assess the full long-term financing implications and to assess how these can be met, a much longer-term and national overview is required, drawing obviously on experience to date. However, in a country which recently introduced a rural pensions scheme (now urban and rural residents pension) which covers over 500 million people without any formal actuarial costing, and which still does not have an official actuarial assessment of the cost of pensions overall, this will be a major challenge.

To inform future policy, it would be desirable to have more in-depth assessments of how the pilots have worked. However, it must be recalled that due to the regionalization of Chinese social policy (Chan and Shi, 2022) considerable autonomy will be devolved to provincial and municipal levels of government and changes will be both incremental and negotiated between the different levels of government. In that context, we can look at possible future

directions for policy drawing on what we know from existing evaluations and international experience (OECD, 2011; OECD, 2020b).

The lessons from national and international experience would suggest that there is no single LTC model which China should adopt and, given the level of variation across China in terms of economic development and demographics, the “pilot” approach already adopted may be the most appropriate. Indeed, it may not be necessary for China to establish one national LTC model (such as a national LTCI scheme). However, to address the inequalities which have been identified, it would be advisable to adopt clear guidelines for what local schemes should achieve in terms of levels of coverage, levels of cost coverage, quality criteria and the balance between home and institutional care. A multiplicity of schemes at provincial level would appear to be undesirable as it may result in unequal services, fragmented administration and create perverse incentives (e.g. for people to seek services in one area rather than another).

This leads to the question regarding how to expand further LTCI, for it to become, ostensibly, a national policy. While the LTCI pilots now cover almost 50 cities, it has been estimated that there are over 100 cities on mainland China with an “urban” population of over 1 million – and this does not even begin to take into account the massive rural population. Further expansion to additional cities would appear the most practical approach, but this will create future difficulties in ensuring a coherent national (or even provincial) approach and in addressing the existing deficits in rural areas. China has, after all, struggled for decades to establish provincial-level pooling in its urban pension system. There is no obvious answer to this challenge and the policy legacies “bird” may already have “flown”, with 50 cities (including some of China’s largest cities) already adopting a municipal approach. This also leaves the question concerning how best to include the rural population with a requirement that cities include those covered by URRBMI being an obvious first step.

One key issue is the overall objective of the LTCI policy. As can be seen from the *Guiding Principles*, there has been a considerable emphasis on providing services to meet what are seen as obvious needs. However, this has arguably led to a situation where LTCI has been planned mainly on the basis of how services can be administered and funded (though without any long-term assessment of the costs or sustainability) rather than on the basis of what the outcomes should be or what type of services people would prefer.

The fundamental goal of LTC policies should be, wherever possible, to enable older people to age at home and in the community, with residential care as the last resort. One issue which can clearly be identified in national and international experience is the need for an integrated and coherent approach to LTC, including home care/ageing-in-place and institutional care. The lessons from both Chinese and international experience supported by the Asian Development

Bank (ADB) (Bai and Xu, 2023) and other agencies highlight the importance of focusing on community-based and home-based care services for older people. Many studies have identified that most people in need of LTC wish to remain in their homes for as long as possible. In a Chinese context too, studies indicate that reimbursement of home-based care by family carers is an option favoured by many people (Wang et al., 2021). When asked about their preferred option, a recent study found that most LTCI beneficiaries chose a family member (65 per cent), followed by a domestic helper (21 per cent) and a formal care worker (14 per cent) (Shi, Chan and Yang, 2024).

Studies suggest that many people in residential care could be supported in the community. For example, a survey of persons in a care institution as part of the ADB-supported LTC project in Yichang (Hubei Province) found that 70 per cent had moved into the facility because of unavailability of family care and that 20–40 per cent of the current residential care occupants could be supported at home if services were available (Bai and Xu, 2023). However, several of the studies discussed above highlight the lack of community-based and home-based care services (e.g. Chang, Yang and Deguchi, 2020; Li et al., 2024). Thus, policies should not focus solely on building more care institutions and should also develop home-based and community-based services.²¹ While the 2020 *Guiding Opinions* do suggest that local authorities “encourage the use of home and community care services”, more concrete and practical steps are required as is a co-ordinated approach between these areas.

It is not clear how local governments have developed their LTCI plans and to what extent they have assessed need. There is the impression that plans have been driven more by the availability of services than by need. To address this, local governments responsible for implementing LTCI should adopt a “commissioning” approach (Bamford, 2001). Commissioning involves a cycle of activities beginning with i) an analysis of needs, resources, the market and risks; ii) moving on to planning how to meet identified needs with the available resources; iii) taking action through, for example, tendering and contract management; and iv) monitoring and reviewing the approach which has been adopted to inform necessary changes. Procurement itself is just part of this broader commissioning model.

Whatever type of services are to be provided, a further key question relates to the funding model for LTCI. Clearly the level of funding required will rise significantly and at least some cities and provinces will have difficulty providing such funding from their own resources. Li and Otani (2018) suggest the establishment of an LTC insurance system that allocates the responsibility for

21. The provision of services in rural areas will require particular attention. Wang et al. (2024) found significant urban-rural disparities in the utilization of home-based and community-based services.

meeting LTC expenses (which are currently borne by individuals and families) more fairly among the government, individuals and families. They argue that the central government should bear some of the fiscal responsibility by conducting fiscal transfers to partially support underdeveloped regions that establish an LTC system. Given the ageing of the population and the predicted rise in the need for LTC, it is clear that LTC costs will rise significantly in the coming decades. Therefore, whatever the precise model chosen, it will be important that it should be financially sustainable (as well as socially sustainable) and an adequate long-term costing of different options will be important. The suggestion by Chang, Yang and Deguchi (2020) that resources be allocated in accordance with population, demographics and need should be examined further.

Finally, China – as elsewhere – is likely to face increasing problems in maintaining a skilled LTC workforce (OECD, 2011; OECD, 2020a). The national government should consider developing a strategy for improving the LTC workforce drawing on international experience and adopting those methods which represent a good fit to the Chinese situation. These measures are likely to include attracting more LTC workers, including non-traditional workers and migrant workers; improving the retention of LTC workers by improving job quality; and improving productivity through means such as the use of assistive technology.

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Maternity, motherhood and access to contributory pensions: The case of Uruguay

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Abstract Maternity and care of young children are among the primary reasons for gender-based discrimination and formal work interruptions faced by women. We examine how maternity impacts access to contributory pensions and the amount of the first pension in Uruguay, a country with relatively high income and low informality in the Latin American context. Motherhood reduces the proportion of women eligible for full pensions by 12–60 percentage points depending on retirement age and length of the interruptions. Access disparities are greater for low-income than high-income women. Many women leave the formal labour market despite having previously made contributions, resulting in them not being able to satisfy eligibility conditions for contributory pensions. Maternity credits while necessary are insufficient alone to address this issue.

Keywords old-age benefit, contributions, maternity benefit, child care, women, gaps in coverage, Uruguay

Introduction

Women comprise a larger proportion of the elderly population than men but represent a smaller share among contributory pension beneficiaries. Additionally, among beneficiaries, women receive lower amounts than men (Amarante,

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The author thanks Marisa Bucheli and Alvaro Forteza for their valuable comments.

Colacce and Manzi, 2017; Bardasi and Jenkins, 2010; Bettio, Tinios and Bett, 2013; Bonnet, Meurs and Rapoport, 2022; Palmer, 2017; Röngvaldsdóttir and Pétursdóttir, 2012; Zanier and Crespi, 2015).

Gender gaps persist in the labour market, especially concerning labour supply and wages. Labour market interruptions due to maternity and unpaid care responsibilities (Angelov, Johansson and Lindahl, 2013; Berniell et al., 2018; Bonnet and Rapoport, 2020; Skogen et al., 2018), discrimination in wages and occupations (Budig, 2018; Correll, Benard and Palk, 2007; England, Allison, and Wu, 2007; Goldin, 2014), differences in part-time employment (Blossfeld and Hakim, 1997; Boll and Lagemann, 2019), differences in human capital by gender (Bettio, Tinois and Bett, 2013; Bobbitt-Zeher, 2007), psychological or preference factors that differ between men and women (Buser, Niederle and Oosterbeek, 2014; Jacob, 2002; Maksimova, 2019), and cultural and societal expectations attributing care and breadwinning roles to women and men, respectively (Gaunt, 2013; Maia et al., 2024; Schmidt, 2017; Zorotovich, Dove and Myers, 2021), are some factors that can explain the gender gaps. However, discrimination and work interruptions stand out (Blau and Kahn, 2006; Berniell et al., 2018; Kleven, Landais and Stogaard, 2019).

Maternity and childcare help explain discrimination against women and formal work interruptions (Angelov, Johansson and Lindahl, 2013; Blau and Kahn, 2017; Berniell et al., 2018; Berniell et al., 2021; Bonnet and Rapoport, 2020; Jedrzychowska, Kwiecien and Poprawska, 2020; Kleven, Landais and Stogaard, 2019; Kunze, 2016; Querejeta, 2020; Skogen et al., 2018; Velez, 2019; Zanier and Crespi, 2015). Women experience statistical discrimination, as employers expect them to take time off work for pregnancy, lactation and childcare responsibilities, leading to fewer employment opportunities for women in certain positions. Moreover, the social expectations that women should assume the primary responsibility for caregiving and men should be breadwinners reinforce gender roles, making it challenging for women to return to work under the same conditions as before maternity and for men to be deeply involved in care responsibilities (Goldstein et al., 2024; Lee and Tang, 2015; Maia et al., 2024).

Contributory pensions are based on work history length and contribution amount. Also, social security does little to account for gender inequalities and gender-specific contingencies, such as women's reproductive function and unequal share of unpaid care work. As such, labour market and other inequalities are perpetuated.

We examine the impact of motherhood on contributory pension access and the amount of the first pension, considering the effect of maternity-related formal work interruptions, i.e. temporal or permanent transitions out of the formal labour market due to motherhood. We focus on Uruguay, a country with relatively low informality and high income in Latin America, where differences in

contribution patterns by socioeconomic groups (Bucheli et al., 2006; Bucheli, Forteza and Rossi, 2006; Bucheli, Forteza and Rossi, 2010; Forteza et al., 2009; Forteza et al. 2011; Lagomarsino and Lanzilotta, 2004; Lavallega, Rossi and Tenenbaum, 2019), maternity-related formal work interruptions (Querejeta, 2020) and the difference in the age at which different strata have their first child (Nathan, 2015) are well documented. We expect to shed light on whether specific policies, such as maternity credits, can compensate for maternity-related formal work interruptions in a context where informality is an issue.

We estimate differences in pension access and first pension amount by comparing a base scenario – women without children – with alternative scenarios, including maternity. Ideally, we would like to compare women with children and a hypothetical scenario in which they do not have children. However, this counterfactual is unobservable. Therefore, we rely on the work histories of male workers (as women without children) and simulate the effects of maternity on their contributions (as women with children).

In the base scenario, we simulate complete work histories and potential pensions if individuals retire between ages 60–70. We apply current provisional rules,¹ assuming all individuals choose to contribute to both pillars of the Uruguay social security system.² We assume an interest rate of 4 per cent per annum (ppa), which is the average since the last social security reform, an inflation rate of approximately 9 ppa, and a nominal wage growth rate of around 10 ppa.

To analyse the effect of maternity, we simulate two alternative scenarios applying different maternity-related formal work interruptions to labour histories simulated in the base scenario. We use maternity probabilities by age, as provided by Nathan (2015), to assign childbirth to the simulated profiles in both alternative scenarios. To simulate labour history after motherhood, we use the estimates of the decrease in the probability of contributing to social security provided by Querejeta (2020). These estimates only provide reductions in the probability of contributing up to ten years after childbirth. Alternative scenarios differ in how long maternity-related interruptions are applied. In the scenario of minimal impact, the negative effect of maternity on formal employment disappears ten years after childbirth. In contrast, in the scenario of maximum effect, the reduction in the probability of contributing remains constant after ten years, affecting the entire contributing life of mothers. Differences between

1. At the time of writing, Uruguay's social security system rules are currently under discussion. Towards the end of 2023, parliament introduced regulatory changes. Therefore, this system utilizes the regulations in force until October 2023, as these are the rules under which people are currently retiring in Uruguay.

2. Uruguay's general social security regime comprises (pillar one) a publicly administered pay-as-you-go defined benefit system and (pillar two) an individual savings system. The first pillar covers low-income workers unless they opt for additional coverage. Both pillars cover other workers.

scenarios account for how maternity-related formal work interruptions affect contributory benefits and pension access.³ Although it is straightforward to reduce eligibility when formal work interruptions increase, it is relevant to public policy to analyse the reduction in pension eligibility due to maternity.

In Uruguay, all female formal workers are entitled to paid maternity leave for at least 12 weeks upon childbirth. Such a period is not considered a maternity-related formal employment interruption since contributions to social security are made. We consider a maternity-related formal work interruption when women leave formal work after motherhood and stop contributing to social security, temporarily or permanently. We cannot determine whether mothers enter the informal economy or just stop working during interruptions.

In the maximum effect scenario, maternity reduces full pension access by 30 percentage points (pp) and more than 60 pp compared to those who are childless. In the minimum effect scenario, this difference is reduced to 12 pp and decreases as the retirement age increases, meaning that for many women, motherhood implies a postponement of retirement. Furthermore, differences in pension access are greater for low-income than high-income women.

A greater proportion of childless women are always eligible to receive any specific pension amount than mothers. However, pension amounts show no relevant differences among those who do access full pensions, regardless of the scenario. Keep in mind that all mothers contribute during mandatory paid maternity leave. Those mothers who are eligible for full pensions necessarily have stability in the formal labour market and high densities of contributions to social security (i.e. accumulate 30 years of contributions at age 60; 25 at age 65, 23 at age 66, 21 at age 67, 19 at age 68, 17 at age 69 or 15 at age 70). Nevertheless, these results may not have factored in the potential impact of interruptions on wages. There are significant differences between pension amounts if we consider all eligible individuals, not just full pension recipients. High-income women's benefits vary more when they experience motherhood than do those of low-income women.

The remainder of the article is organized as follows. Next, we provide background information and then analyse the Uruguayan pension system, focusing on the differences between women and men. In turn, we outline the methodology, present the results and conclude with final reflections.

Background

High incidence of formal work interruptions (i.e. temporal or permanent transitions out of the formal labour market), greater reliance on part-time jobs,

3. The effect on benefit amounts does not include the possibility that interruptions may affect wages, so we interpret it as the minimum impact on pension amounts.

and discrimination are some factors that lead to women accumulating fewer years of social security contributions than men, regardless of their age. Women are less likely to qualify for contributory pensions; if they do, their benefits tend to be lower than those of men. In developing countries, informality is another factor affecting women disproportionately, as they often seek more flexible employment options due to their care responsibilities (Berniell et al., 2018; Berniell et al., 2021; Cassirer and Addati, 2007).

Lagomarsino and Lanzilotta (2004); Bucheli et al. (2006); Bucheli, Forteza and Rossi (2006); Bucheli, Forteza and Rossi (2010); Forteza et al. (2009); Forteza et al. (2011); and Lavallega, Rossi and Tenenbaum (2019) analyse contribution densities, contribution patterns, and accumulated contributions using administrative records of work histories or simulations based on such records in Uruguay and other Latin American countries. They find that different socioeconomic groups have different contribution patterns, with low-income individuals and women being the most vulnerable, having a lower probability of being eligible for a contributory pension at any given age. They observed the overall effects, which could result from a combination of discrimination, segregation, cultural and social expectations about care and breadwinning roles, personal preferences, the effects of maternity and care, and other factors.

International and regional evidence extensively documents the negative impact of maternity and care responsibilities on labour market activity. Studies by Addati et al. (2018); Berniell et al. (2018); Berniell et al. (2021); ILO (2024); Kleven, Landais and Stogaard (2019); de Quinto, Hospido and Sanz (2021) find employment rates drop by up to 30 per cent compared to the period before childbirth. Such an effect is linked to the first living child, as the impact is either non-existent or much smaller when analysing marriage or miscarriage (Berniell et al., 2022).

Using Uruguayan administrative records, Querejeta (2020) studies the impact of childbirth on formal employment reduction for women aged 18–40. She finds a decline in the probability of contributing to social security by 11–30 pp in the 12 months after childbirth, compared to the year preceding the event. Low-income and high-income women experience reductions of 30 pp and 50 pp, respectively, a decade after childbirth. The adverse effects fail to dissipate, in contrast to what Kleven, Landais and Stogaard (2019) and Kuziemko et al. (2018) find in more developed economies. However, Querejeta (2020) only measures the effect on formal employment. Many women may opt for informal work after childbirth, seeking more flexible employment options. For instance, Berniell et al. (2018) and Berniell et al. (2021) discovered that the long-term negative impact on employment (both formal and informal) in Chile is approximately 17 pp. Simultaneously, there is a 40 pp increase in part-time employment and a 38 pp increase in informal employment following childbirth.

In recent years, there has been a growing interest in the pension gender gap, likely due to shifts in family dynamics. With an increase in the rates of divorce, individuals who choose to remain unmarried, common-law unions, and, more importantly, single-parent headship, especially single mothers (Addati et al., 2018), it has become crucial for women to be eligible for contributory pensions. Women tend to receive contributory benefits to a lesser extent than men. Instead, they are more likely to receive non-contributory or survivorship benefits and tend to receive lower contributory benefits than men (Alaminos and Ayuso, 2019; Amarante, Colacce and Manzi, 2017; Bettio, Tinios and Bett, 2013; Rönngvaldsdóttir and Pétursdóttir, 2012).

There is a strong correlation between the pension gender gap and maternity and childcare responsibilities (Bettio, Tinios and Bett, 2013; Bonnet and Rapoport, 2020; Foster and Smetherham, 2013; Jędrzychowski, Kwiecien and Poprawska, 2020; Velez, 2019). Specifically, women with children experience a lower probability of accessing contributory pensions and receive reduced amounts of benefits. Social security systems in many countries attempt to address this issue by providing maternity or care credits.

Maternity or care credits (i.e. social security contributions paid on behalf of mothers or women in general or fathers in some cases) vary in duration, amount and requirements across countries. European social security systems tend to offer broad credits, while Latin American systems typically provide shorter credit periods conditional on childbirth or adoption. Brazil and Costa Rica offer unconditional credits for all women. In Uruguay, women are granted one additional year of social security contributions, up to a maximum of five years, for each child born or for the adoption of a child (Amarante and Tenenbaum, 2018; Dekkers et al., 2020; Janlowski, 2011).

The Uruguayan Context

Social development indicators and population

Uruguay is a small Latin American country, with just over 3.5 million inhabitants and a landmass of 176,215 square kilometres. According to the World Bank,⁴ Uruguay is distinguished in Latin America for its high income, low poverty and low inequality. In 2023, Uruguay's per capita GDP was the equivalent of nearly 23,000 US dollars (USD), a figure that was more than double the average for Latin American countries and for middle-income countries. However, the country's per capita GDP is roughly less than half that for high-income countries.

4. All indicators in this section are taken from World Bank, [Data](#) (online).

The poverty headcount ratio at 6.852017 PPP USD in 2022 was 6 per cent of the Uruguayan population. In comparison, it was 2 per cent, 24 per cent and 25 per cent for high-income, upper-middle-income countries and Latin American and Caribbean countries, respectively.

Uruguay is among the most equal countries in Latin America; the Gini index was 40.6 in 2022. However, this figure is much higher than that for most European and Asian countries. Inequality is not explained in Uruguay because of the rural population; only 4 per cent of the Uruguayan population is rural, much lower than the 18 per cent average in Latin America and the 31 per cent average in upper middle-income countries. Also, Uruguay has lower proportions of ethnic minorities than Latin America generally. According to the 2023 Census, the Uruguayan population is predominantly of Spanish and Italian descent and identifies as White (88 per cent). Ten per cent of the Uruguayan population declares to have Afro ascendency, and 6 per cent declare Indigenous ascendency.

Pensions: Differences between men and women

Uruguay's general social security regime comprises (pillar one) a publicly administered pay-as-you-go defined benefit system and (pillar two) an individual savings system. The first pillar covers low-income workers unless they opt for additional coverage. Both pillars cover all other workers. Coverage extends to non-professional independent workers and dependent workers from industry, commerce, domestic service, construction, rural sectors, and the public sector, with some exceptions. More than 80 per cent of Uruguayan pensioners receive benefits from the general regime.

According to the International Labour Office, about 22 per cent of Uruguayan workers are informal;⁵ that is 10 pp lower than in Latin America but 5 pp higher than for European and Central Asian countries. Contributory full pensions include ordinary, advanced-age, disability and survivorship pensions. Furthermore, individuals can receive an annuity from their savings account at age 65, regardless of vesting periods. The ordinary pension is available at age 60 with 30 years of contributions. The advanced-age pension is available at age 65 with 25 years of contributions. In the absence of 25 years of contributions at age 65, individuals must delay retirement by one year for each 2-year period shortfall of contributions, up to age 70 and 15 years of contribution. Pensions consist of a benefit provided by the first pillar plus an annuity for those who have contributed to the individual savings pillar. A minimum pension applies to the sum of benefits from both pillars. Most minimum pension recipients are women (Camerano, 2019).

5. Data retrieved from [ILOSTAT](https://ilostat.ilo.org/) (online).

Children, disabled children or parents, spouses, common-law partners, or divorcees from a deceased worker or retiree can qualify for survivors' pensions. Additionally, wages must fall below a certain threshold, which is higher for men than women. Over 90 per cent of survivors' pension beneficiaries are women (CESS, 2021). Women also receive non-contributory benefits more frequently than do men.

There is an ongoing debate regarding which social security scheme is better for women. Capitalization schemes are actuarially fair, while defined benefit schemes dilute the link between benefits and contributions, potentially favouring workers with fragmented work histories. However, this scheme requires a minimum number of years of contributions to grant rights, which is relatively high in mature systems. Therefore, a defined benefit scheme may not be more advantageous for vulnerable workers than one actuarially fairer (Forteza and Rossi, 2013).

Table 1 illustrates the distribution of beneficiaries by generation and gender (INE, 2011). Men are more likely to receive contributory pensions at any age. While the number of individuals without a pension at age 70 is similar for men and women, over 77 per cent of men receive a contributory pension, while only 57 per cent of women do so. Survivorship pensions explain the difference.

Table 1. *Retirees by gender and generation (year 2011)*

	Age 60		Age 65		Age 70	
	Women	Men	Women	Men	Women	Men
No pension	60.15	69.47	33.93	31.98	18.69	18.58
Own-right contributory pension BPS	22.01	15.52	41.11	49.38	54.97	63.39
Own-right contributory pension Other	2.48	12.09	3.84	15.34	2.11	13.98
No contributory pension BPS	0.00	0.00	0.00	0.09	2.29	2.04
No contributory pension Other	0.00	0.00	0.00	0.00	0.00	0.00
Survivors' pension BPS	11.60	0.15	14.02	0.15	16.08	0.30
Survivors' pension Other	1.56	0.00	3.63	0.22	3.72	0.00
Disability pension BPS	2.20	2.77	3.46	2.84	2.14	1.72
Total	100	100	100	100	100	100

Notes: Individuals with double benefits, one provided by the Social Insurance Bank (*Banco de Previsión Social – BPS*), the public social security institute and the other by another organization, are computed only in BPS. Likewise, if they obtain a contributory pension and another benefit, they are computed in the contributory pension. *Source:* Instituto Nacional de Estadística (2011).

Uruguayan social security has undergone several changes affecting women's pension access. First, in 1995, the minimum retirement age was equalized for men and women, which meant a 5-year increase for the latter, and which failed to take into account the heavier burden of care and unpaid work placed on women (Aguirre and Scuro, 2010).

Also, the minimum vesting period conditions were augmented for all workers, and a labour history record was created. However, these changes are not systematically gender-sensitive; women face more difficulties than men satisfying contribution requirements, irrespective of the total number of years required. In 2008, however, contribution requirements were reduced, positively affecting female pension access (Bucheli et al., 2006; Bucheli, Forteza and Rossi, 2006; Bucheli, Forteza and Rossi, 2010; Lavalleja and Tenenbaum, 2017; Lavalleja, Rossi and Tenenbaum, 2019).

In 1995, eligibility criteria for survivors' pensions were expanded to include widowed or divorced men who were financially dependent on their deceased spouse. In 2008, male and female common-law partners were also included. Nevertheless, requirements are more lenient for women than men. Survivorship pensions remain a female benefit.

In 2008, child credits were introduced, granting one year of social security contributions, up to a maximum of five years, for women upon childbirth or for the adoption of a child. These credits help women meet vesting period conditions at younger ages or improve pensions through a higher technical replacement rate (Lavalleja, Rossi and Tenenbaum (2019); Lavalleja and Tenenbaum (2017); Santos (2014); and Scardino (2015).

Maternity allowances and childcare services in Uruguay

In Uruguay, formal workers are entitled to numerous benefits, including sickness insurance, partial disability benefits, unemployment benefits, and allowances for maternity, paternity, and newborn care. There is no paid leave to care for sick family members, which is relevant when there are young children and elders; women are usually the caregivers. Maternity allowance is mandatory, while paternity and parental allowances for newborn care are voluntary. All three are paid leaves and include social security contributions. Only 2 per cent of newborn care beneficiaries are men (Galván et al., 2021). Most people perceive that caring for babies is primarily the responsibility of mothers, mainly due to breastfeeding (Batthyány, Genta and Perrotta, 2018). Unfortunately, reinforcing traditional gender roles can make it challenging for women to return to formal labour activities at pre-childbirth levels.

Furthermore, family allowances for formal workers and the general population are available for low-income people with children attending formal education. The value varies with family income and children's age. The benefit is usually paid to mothers.

Regarding childcare, Uruguay has been advancing toward implementing a National Care System, which intends to expand care services for the dependent population: children, elderly dependents, and people with disabilities. Childcare and education are separate policies in Uruguay. Formal education starts at age 3 but is mandatory from ages 4–18. For infants up to age 3, childcare is available through various public and private services. Most childcare services provide daily care for potty-trained children (aged 2 or older). Free-of-charge childcare targets vulnerable and low-income families. Originally, all services covered four hours daily; they are now expanding to six and eight hours per day. Public preschool and public childcare are free of charge and state funded, although childcare is privately organized (Amarante, Colacce and Tenenbaum, 2019).

Methodology

The methodological approach employs simulated work histories between ages 18–70 for individuals with low and high wages (below and above the median). We calculate pension entitlements and the amount of the first pension between ages 60–70. Consequently, we compute eleven benefits for each person in each scenario.

Individuals must have reached the minimum legal age and vesting period conditions to qualify for contributory pensions at each age. If they fail to meet requirements, benefits are zero. We compute the ratio pension to the minimum pension for ease of presentation. The aim is to analyse the effect of motherhood on access to a full pension by socioeconomic level.

We want to compare a woman who experiences motherhood with one who does not. However, the counterfactual scenario is unobservable: we can only observe whether women have used maternity benefits during the observation window. In the base scenario, we estimate contributions representative of work histories of women who have not had children, including interruptions due to periods of informality and unemployment, using the work history of men. In the alternative scenarios, we apply the estimates of the reduction in the probability of contributing due to maternity to this base scenario.

In alternative scenarios, we apply Querejeta's (2000) estimates of reducing the probability of contributing to the base scenario after childbirth. Monthly estimates are available for the 120 months following childbirth. In the minimum maternity effect scenario, the maternity impact disappears ten years after childbirth. In the

maximum maternity effect scenario, reductions in the probability of contribution remain unchanged after ten years following childbirth, affecting all contribution lives (see Table 2). For each scenario, we simulate 1,000 individuals from each income level.

We analyse the effect of maternity on pension access and pension amounts by comparing scenarios. Each methodological element is detailed below.

Data

We used a sample of administrative records from Uruguay, which contained monthly records from April 1996 to April 2015. We selected 352,197 male dependent contributors born between 1915 and 1986 with at least one non-zero remuneration. The database includes personal characteristics such as gender, date of birth, and nationality, as well as information about the job position (type of task, contract type, and remuneration type), the company where the contributor was employed (size and industry sector), the contributions made (whether they contributed or not and the taxable amount on which they contributed), and the benefits received (sickness, maternity, unemployment, and pensions if applicable, along with their duration and amounts).

Socioeconomic status

We categorize individuals into two groups based on the formal income distribution of their generation: those with average income below the median and those above it. We compute individual real income as the monthly average of all non-zero

Table 2. *Scenario characteristics*

Scenarios/ Characteristics	Contribution	Maternity-related interruption	Children
"Base"	Probability of contribution by age according to socioeconomic status	None	None
"Minimum effect"	Probability of contribution by age according to childbirth and socioeconomic status	Ten years after childbirth, maternity-related interruptions disappear	Probability of becoming a mother by age and income level
"Maximum effect"	Probability of contribution by age according to childbirth and socioeconomic status	Maternity-related interruptions remain constant after ten years from childbirth	Probability of becoming a mother by age and income level

Notes: Socioeconomic status affects both the probability of contributing and the probability of becoming a mother.
Source: Author's elaboration.

Table 3. *Female formal workers by education level and socioeconomic status*

	Low socioeconomic status (average income under the median)	High socioeconomic status (average income above the median)	Total
Up to 8 years of formal education	37.73	8.48	23.02
Between 9 and 12 years of formal education	44.02	34.80	39.39
13+ years of formal education	18.25	56.71	37.59
Total	100.00	100.00	100.00

Source: Author's elaboration based on INE (2011).

wages received during the observation period. Individuals remain in the same group throughout their entire life, thereby providing a measure of their socioeconomic status.

Probability of childbirth by age and socioeconomic status

Nathan (2015) estimated the probability of having the first child by age and education strata in Uruguay using data from the 2011 national census for 1954–1956, 1959–1961, 1964–1966, 1969–1971, 1974–1976, 1979–1981, and 1984–1986 cohorts. The author documented an increase in heterogeneity over time in the age at which women from different educational strata have their first child. Women with low education levels have their first child at a younger age than those from higher educational strata. Using estimates from a recent generation provides further precision in this heterogeneity, but the information is limited to younger ages. In contrast, using information from an older generation provides information for a more comprehensive age range, but precision in heterogeneity is lost. Therefore, we use an intermediate generation, the 1969–1971 cohort, and apply the probability of having a child to the simulated cohort. For this generation, Nathan (2015) worked with the probability of having the first child between ages 12–39 by education.⁶ The low educational stratum includes women with up to 8 years of formal education, the middle stratum includes women with between 9–12 years of formal education, and the high stratum includes women with 13 years or more of formal education.

We use the 2011 Continuous Household Survey by the National Institute of Statistics (INE, 2011) to link education and the previously defined socioeconomic status. We select formal female workers in their principal and secondary occupations and classify them into two income groups by generation.

6. We use the probability of childbirth for women between ages 18–39.

Then, we compute the proportions of each education level within each income group and the whole sample. Table 3 shows the distribution of education groups within each income group.

Using the distribution provided, we randomly assign each simulated individual an educational level to match the proportions in Table 3. Next, we calculate the age at which they have their first child by applying the probabilities by age and educational level from Nathan (2015).

To do this, we compute the probability of remaining childless by socioeconomic status from ages 18–39. At age 18, the probability of surviving without children complements the probability of having the first child. At age 19, the probability of surviving without children complements the probability of having the first child conditional on not having had the first child before, and so on. We then generate a random variable uniformly distributed between zero and one: $ran^{z,i}$. Woman z from socioeconomic status i gives birth to her first child at age x if:

$$S_{x-1}^i > ran^{z,i} \geq S_x^i \text{ and does not give birth to her first child at age } x \text{ otherwise.}$$

Where S_x^i is the probability of surviving childless up to age x for women from socioeconomic status i ⁷.

Contribution histories and pensions

We simulate contribution histories from ages 18–70 for 1,000 individuals in each income group. We use administrative records, and following Bucheli, Forteza and Rossi (2006), we compute the proportion of individuals who make contributions for each age/month by contributions status in the previous month. We use this proportion to approximate the probability of making contributions for each contribution status. We then generate a random variable uniformly distributed between zero and 1 for each month of each age: sim_t . A woman from socioeconomic status i contributes in month t at age x if:

$$sim_t \geq (1 - c_{x,t}^{i,z}) \text{ and does not contribute otherwise.}$$

Where $c_{x,t}^{i,z}$ is the probability of contributing in month t at age x for an individual of socioeconomic status i and contribution status in the previous month z , with $z = \{contribute, notcontribute\}$.

7. This article is supplemented by an Appendix (developed by the author and made available to readers). See Supporting Information, A.1. Please refer to the Appendix for the distribution of simulated ages at which the first child is born, stratified by educational level and income level. Simulated ages align with Nathan's (2015) study, using ages starting from age 18.

To assign the wage in case of contribution, we deflated the observed wage by the average wage index. We compute deciles of deflated wages for each age and socioeconomic stratum using records with non-zero wages. We randomly assign an income decile to everyone (within their stratum), which becomes a permanent characteristic. For every one of age x , stratum i , and decile d , we assign the monthly wage $W_{t,x,i,d}$. If an individual does not contribute, their wage is zero that month.⁸

We compute pensions based on current regulations, assuming all individuals contribute to both pension pillars. Individuals do not experience any disabilities throughout their lives and live until at least age 70. We compute pension entitlements between ages 60–70. Since individuals contributed to both pillars in all cases, full pensions consist of a benefit from the pay-as-you-go pillar and an annuity from the individual accounts pillar. To ease the presentation, we show full pensions as a ratio compared to the minimum pension. We analyse access to contributory pensions only, omitting social assistance or survivors' pensions.

If a woman does not meet the requirements, she will not receive benefits up to age 64. However, at age 65, all simulated individuals are entitled to an annuity, regardless of their total number of years of contributions. This benefit can be relatively small and may even be lower than the minimum pension, as years of contribution may be few. We will refer to this benefit as an exclusive annuity from individual accounts, rather than a full pension.

Maternity-related formal work interruptions

We use the estimates of the reduction in the probability of contributing, as determined by Querejeta (2020) for Uruguay, using administrative records for two income levels: below median (low) and above median (high). These probabilities are estimated up to 120 months after childbirth for women who have worked formally, who contributed and had children between ages 18–40. Reducing the probability of contributing depends on the income level and the time elapsed since childbirth.

We correct the probability of contributing by age and income level using these estimates and the age at childbirth. In the maximum effect scenario, we assume the reduction in the probability of contributing, given that the individual was contributing, remains stable at the level of the tenth year after childbirth. This scenario is the worst situation that women could face after motherhood. We

8. This article is supplemented by an Appendix (developed by the authors and made available to readers). See Supporting Information, A.1. Please refer to the Supplementary Information for a comparison of the observed and simulated age-specific contribution densities and wage profiles. The simulated series is similar to the observed series.

interpret there is a permanent increase in the incidence of informality among mothers following the findings regarding the increased participation of women in the informal economy after motherhood, as documented by Berniell et al. (2021) in Chile.

We also simulate a scenario of minimum effect if, ten years following the event, all women return to the formal labour market under the same conditions as before motherhood (i.e. using the contribution probabilities of the base scenario). So, the reduction in the probability of contributing due to motherhood disappears after ten years following childbirth.

We generate another random variable uniformly distributed between zero and one for each month of each age: sim_t . A woman from socioeconomic status i who has given birth to a child at age m contributes on month t at age x and p periods after childbirth if:

$$sim_t \geq \left(1 - c_{x,t}^{i,1}\right) \text{ with } x < m \text{ or } x > m \text{ and } p > 120, \text{ if she was contributing on previous month;}$$

$$sim_t \geq \left(1 - \left[c_{x,t}^{i,1} - r_p^i\right]\right) \text{ with } x \geq m \text{ and } 0 \leq p \leq 120, \text{ if she was contributing on previous month;}$$

$$sim_t \geq \left(1 - c_{x,t}^{i,0}\right) \text{ if she was not contributing on the previous month;}$$

And does not contribute otherwise.

Where $c_{x,t}^{i,z}$ is the probability of contributing in month t at age x for women of stratum i and contribution status on previous month z , with $z = \{contribute, notcontribute\}$. r_p^i is the reduction in the probability of contributing for women of stratum i p periods after childbirth. In the maximum effect scenario, r_p^i remains constant after 120 periods.

Results

Average results

First, we analyse full pension access by age and scenario. The simulated proportion of individuals who could access a full pension may differ from the proportion of observed retirees by age. On the one hand, simulations may show higher numbers as we analyse the proportion of individuals eligible for pensions.

However, this does not necessarily mean that the individual will retire at that moment. There is evidence that, on average, individuals postpone retirement beyond the minimum legal requirements.

On the other hand, simulations could be biased downwards for at least two reasons: mechanisms for recognizing contributions and bonified activities. In simulations, we apply observed probabilities of contributing and compute the years of contribution that each person would accumulate according to those probabilities. Since systematic registration only began in 1996, Uruguay has yet to develop complete labour history records. Therefore, several more relaxed mechanisms exist for granting contributions before 1996. According to Colombo (2013), the most commonly used mechanisms for recognizing years of contribution are documentary evidence (pay slips, work records, among others), testimonial evidence (witness statements), presumptive contributions (when there is evidence of use of sickness, maternity or disability insurance), and fictitious contributions that in some cases require to prove only half of the contributions through registration of the work history or documentary evidence. Thus, current pensioners receive benefits using more lenient mechanisms than the labour history records. We do not have information to correct for these other mechanisms. If labour history records were strictly applied, the high percentage of coverage in old age could be modified.

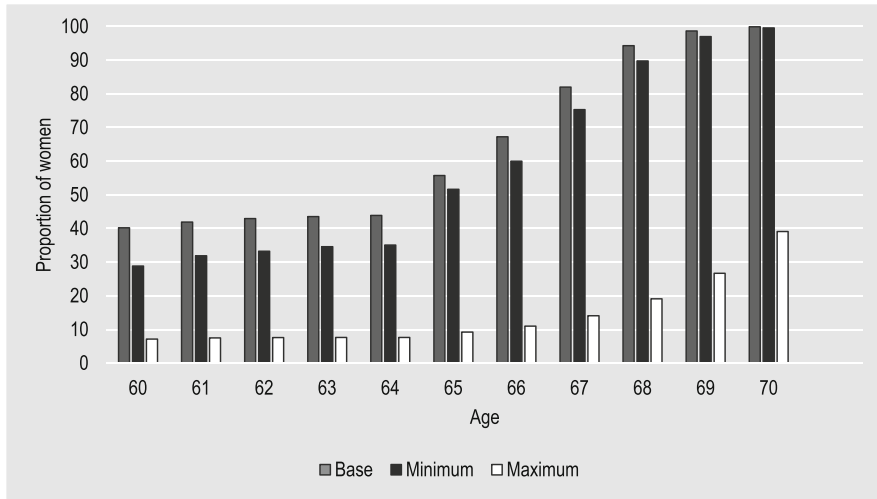
In addition, many activities receive bonuses that act to supplement the total number of years of contributions, meaning these individuals do not need to work longer to accumulate the minimum legal requirements to access pensions. Many of these activities are in jobs traditionally occupied by women, such as teaching, while others are traditionally male dominated, such as handling hazardous substances. The bonuses vary by type of activity and can modify the probabilities of contributing by age for different groups of workers. In future research, it would be worthwhile to delve deeper into this aspect by estimating and simulating by sector of activity.

In Figure 1, we present results regarding the proportion of eligible individuals for a full pension by age and scenario as a percentage of the total number of individuals. Therefore, those eligible at age 60 are also eligible at age 61 and thereafter.

The proportion of eligible individuals for full pensions is always higher for childless women (base scenario). At age 60, just over 40 per cent would receive a pension, and around 44 per cent would be eligible at age 64, meaning they have accumulated at least 30 years of contributions. Coverage increases with age from nearly 56 per cent at age 65 to almost 100 per cent at age 70.

In the minimum effect scenario, the proportion of women who can access a full pension before age 65 is between 9 pp and 12 pp lower than in the base scenario. These differences decrease from age 65, and there are no differences at age 70. Therefore, we observe that maternity implies a postponement of eligibility.

Figure 1. Access to full pensions – the proportion of individuals by age and scenario



Source: Author's elaboration.

In the maximum impact scenario, less than 10 per cent of women would access a full pension, and only 20 per cent would do so at advanced ages, such as at age 68 and age 69. At age 70, only 40 per cent would be eligible. Therefore, in this scenario, maternity has a noticeably detrimental effect on obtaining a full contributory pension.

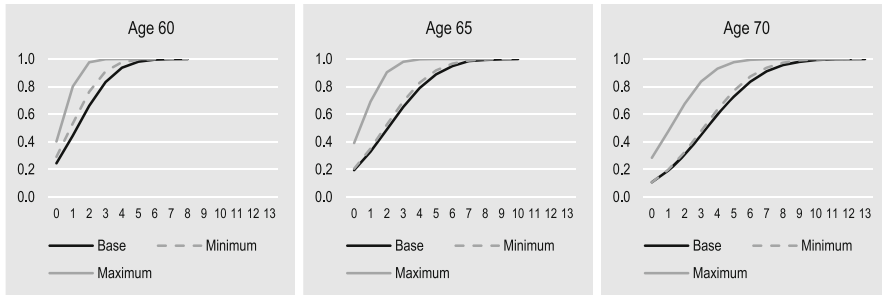
As mentioned, access to full benefits implies receiving an ordinary or an advanced-age pension. We find that mothers receive advanced-age pensions more than childless women. Therefore, motherhood implies access to lower quality pensions. These results stem from differences in accumulated years of contribution. As expected, maternity-related interruptions decrease the number of contributions made by mothers.

Figure 2 shows cumulative distribution functions for the full pension to minimum pension ratio for selected ages. The y-intercept shows the proportion of women not eligible for full pensions by scenario and age in each case.

First, the base scenario is dominant compared to the others, and the minimum effect scenario is dominant compared to that of the maximum effect. A greater proportion of childless women are always eligible to receive any specific pension amount than mothers.

Differences between scenarios decrease with age. When women postpone retirement, pensions increase. We can expect higher replacement rates in the first pillar, and new contributions as well as a longer capitalization period for previous contributions in the second pillar. After age 65, there are no substantial

Figure 2. Cumulative distributional function of full pensions – selected ages



Source: Author's elaboration.

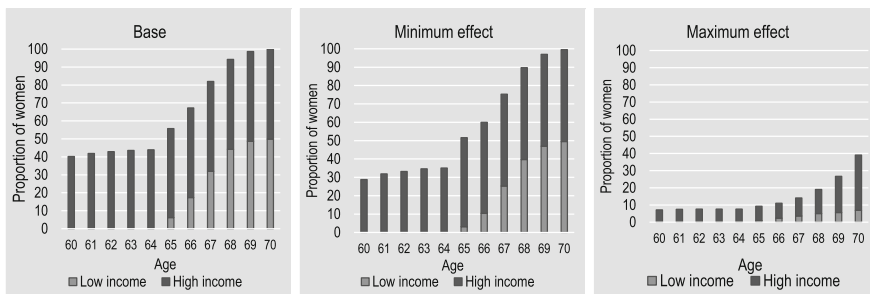
differences between pensions received by childless women and mothers with a minimum maternity effect, except for access restrictions. Mothers remain in a weak situation in the maximum impact scenario.

If we include people receiving any benefit – ordinary pension, advanced-age pension, and an annuity from the individual accounts pillar – coverage problems disappear at age 65. However, most “new” beneficiaries would receive meagre benefits, lower than the minimum pension, at least at younger ages. The situation improves in the scenario with the minimum effect at age 70.

Results by income level

Figure 3 shows the proportion of women accessing full pensions by income level. Access to full pensions before age 64 is almost exclusively limited to high-income

Figure 3. Full pension access – the proportion of women by income level, age, and scenario



Source: Author's elaboration.

women. From age 65, eligibility for low-income women becomes increasingly important due to advanced-age pensions.

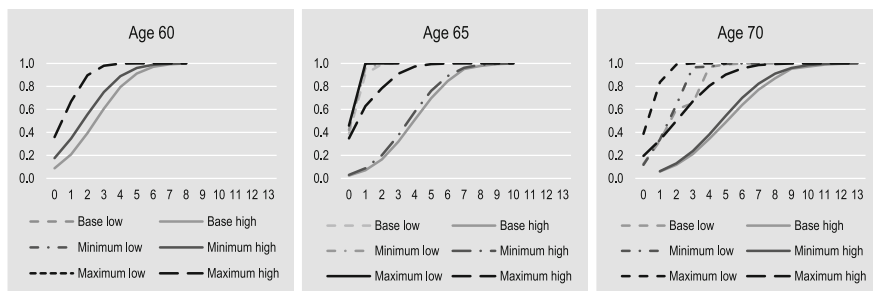
Coverage differences between scenarios are more pronounced for low-income than for high-income individuals. The latter are eligible for full pensions in base and minimum effect scenarios. In the maximum impact scenario, access to full pensions remains very low even for high-income women, reaching around 30 per cent at age 68 and just under 70 per cent at age 70.

Low-income women are much less likely to be eligible for full pensions than higher-income women in all scenarios. Just under 20 per cent of the childless women would access a full pension at age 65, 40 per cent at age 66, just over 60 per cent at age 67, and more than 80 per cent at age 68. When maternity-related formal work interruptions end ten years after childbirth, pension access is around half that of the base scenario at age 65 and age 66, representing around 80 per cent at ages 67–68, and there are virtually no differences at older ages. When maternity-related interruptions continue until the end of the working life, few women are eligible for full pensions.

Figure 4 shows the cumulative distribution functions of full pensions times the minimum pension for selected ages, scenarios and income levels. Low-income women are excluded from the system until they reach age 65. We observe the expected dominance, although sometimes there are no differences between the base and minimum impact scenarios. In all cases, there are significant differences between high-income women's eligibility in the base and minimum impact scenarios compared to the rest.

If we include women receiving any contributory pension – ordinary pension, advanced-age pension, and annuity at age 65 – there is a substantial improvement in access to pensions for low-income women. There are no differences for high-income women regardless of the scenario considered.

Figure 4. Cumulative distributional function of full pensions by income level – selected ages



Source: Author's elaboration.

Final reflections

Maternity and childcare responsibilities can interrupt women's formal labour market participation, significantly impacting their future access to contributory pensions. Receiving contributory benefits becomes critical considering changing family arrangements, such as an increase in divorce rates and a rise in the number of people who never marry or do not formalize their unions or who are single parents. These changes limit women's access to survivorship pensions.

In this study, we use the reduction in the probability of contributing to the social security system after childbirth, as estimated by Querejeta (2020), and apply it to representative simulations of the work histories of childless women. Although it is straightforward to reduce eligibility when formal work interruptions increase, it is relevant to public policy to analyse the reduction in coverage due to maternity and motherhood. In the maximum impact scenario, maternity and childcare responsibilities reduce full pension eligibility by 30–60 pp compared to childless women. In the minimum impact scenario, such difference is reduced to less than 12 pp and decreases as the retirement age increases. Additionally, the negative effect of maternity and motherhood disproportionately affects access to full contributory benefits for low-income women.

Childless women will always reach any specific benefit amount in a greater proportion than mothers. Such an effect is more significant for younger than older women since access requirements are more prominent at younger ages. When considering socioeconomic status, we find that low-income women continue to be the most affected by the negative impact of motherhood when considering those who access full pensions and when including women who only access an annuity at age 65.

Social security childcare credits help some women access contributory pensions earlier. However, the findings suggest that these credits may not be sufficient to address the gender inequalities that arise from maternity-related interruptions. Although we assume that women only have one child and thus are granted a one-year childcare credit towards their total contributions to social security, low-income women tend to have more children and may be eligible for extended credits. Future studies should compare the situation without maternity credits and with different kinds of credits, whether more generous or targeted to specific groups.

However, it is not reasonable to expect the social security system to correct every inequality in the labour market and compensate for cultural and societal expectations. Uruguay provides paid leave for the care of a newborn that mothers or fathers can avail of – but 98 per cent of beneficiaries are women. Also, there are paid and free-of-charge childcare services, but most target potty-trained children

and vulnerable or low-income families. Expanding childcare services to include younger children and paid leave to care for sick family members can help women stay in formal jobs after childbirth. However, it would appear that a lot of work remains to be done to change cultural and societal expectations regarding the roles that men and women should have in raising children.

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Supporting information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Racial and ethnic inequalities in pension insurance coverage in Colombia

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Abstract While the low coverage levels of Latin American pension systems are amply documented, inequalities within demographics beyond income and education are less understood. To fill this gap, this article analyses racial and ethnic differences in pension coverage in Colombia. Since racial and ethnic minorities in Colombia are disproportionately poor, old-age pensions are especially important for these marginalized populations. The article finds that indigenous and, to a lesser extent, afro-Colombians and their partners are significantly less likely to contribute to any pension programme than non-minorities. Much – but not all – of this gap can be explained by educational and occupational differences.

Keywords pension scheme, old-age benefit, coverage, racial discrimination, ethnic factor, equal treatment, Colombia

Introduction

Many Latin Americans do not have a pension that provides them with sufficient income in old age because they do not – or do not sufficiently – contribute to a pension insurance programme, and because social assistance pensions – if

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The author thanks two anonymous referees for their valuable suggestions, Michael Guillen and Alejandra Tantamango for superb research assistance, and Nicholas Winter and Vince Wiggins, respectively, for providing the user-written Stata packages `combomarginsplot` and `grc1leg`.

available – are small (e.g. Mesa-Lago, Cruz Saco and Gil, 2021). Recent research has shed light on who is especially affected by this lack of pension coverage, especially with respect to income, education and gender (e.g. Amarante, Colacce and Manzi, 2017; Mesa-Lago, Cruz Saco and Gil, 2021).

This article uses Colombia as an example to expand this research to racial and ethnic differences in pension coverage and uses empirical analyses to increase our understanding of the social and demographic factors associated with these inequalities. Compared to other Latin American countries, Colombia ranks in the middle with respect to pension insurance coverage and slightly above average in terms of public expenditures as a percentage of GDP (Arenas de Mesa, 2020; Mesa-Lago, Cruz Saco and Gil, 2021). Colombia has the second-highest share of afro-descendants in South America at 9.34 per cent; a further 4.4 per cent of the population are considered indigenous, though these shares are likely an underestimate (DANE, 2019a; DANE, 2019b). In Colombia, minorities have lower levels of literacy and education and less access to public services than non-minorities (DANE, 2019a; DANE 2019b; Ministerio de Cultura, 2009; see also Delgado, 2020). Average incomes are 60 per cent and 30 per cent lower in indigenous and afro-Colombian households, respectively, compared to non-minority households (Urrea-Giraldo, Valoyes Vélez and Quiroz Cortés, 2023). They are also more likely to be poor: 22.4 per cent of afro-Colombians and 39 per cent of indigenous Colombians are considered to be multidimensionally poor, well above the national average of 12.9 per cent (UNFPA, 2023).

The majority of Colombia's workers are active in the informal economy, with only limited access to the country's social insurance system. Indigenous Colombians are concentrated in the agricultural and manufacturing sectors. Over 62 per cent of indigenous workers are engaged in these sectors, compared with 29 per cent of afro-Colombians and 24 per cent of non-minorities (Urrea-Giraldo, Valoyes Vélez and Quiroz Cortés, 2023). Unsurprisingly, perhaps, indigenous Colombians have the highest rate of informality at 87 per cent, followed by afro-Colombians at 71 per cent, and non-minorities at 56 per cent (Urrea-Giraldo, Valoyes Vélez and Quiroz Cortés, 2023). Independent workers – that is, those working on their own account – make up the largest group of workers, but the share of those from non-minorities (42 per cent) is smaller than that of afro-Colombians (54 per cent) and indigenous Colombians (65 per cent) (Urrea-Giraldo, Valoyes Vélez and Quiroz Cortés, 2023). The overwhelming majority of independent workers are active in the informal economy, and minorities are more likely to work in the informal economy than non-minorities (Urrea-Giraldo, Valoyes Vélez and Quiroz Cortés, 2023).

DANE (2021) reports that 28.4 per cent of Colombians aged 60+ live in poor households, a figure which is lower than that for other age groups (the national average is 42.5 per cent) (DANE, 2021). Among those receiving an old-age

pension, poverty rates are much lower, with 4.9 per cent considered to be in monetary poverty (DANE, 2021). The multidimensional poverty rate for people aged 60+ is 18 per cent. Across all age groups, only the rate for those aged 10–28 is higher at 20 per cent (DANE, 2021). These population averages mask big differences between rural and urban areas. For adults aged 60+, the multidimensional poverty rate in rural areas is 38.1 per cent versus 12.1 per cent in urban areas (DANE, 2021).

Understanding inequalities in the Colombian pension system provides insights into the origins and intersectionality of inequality and can inform policies aimed at reducing it. This is especially important at a time when a number of countries in Latin America – including Colombia – are considering structural pension reforms to address the fundamental challenges of low population coverage, difficulties in providing sufficient income in old age, and a lack of pension system financial sustainability (e.g. Mesa-Lago, 2020).

Using data from the National Survey on the Quality of Life (*Encuesta Nacional de Calidad de Vida* – ECV) 2018 and 2021–23 of individuals of working age, it is found that Colombian minorities are significantly less likely to contribute to a pension programme than non-minorities, an inequality that is amplified by the fact that their partners are also significantly less likely to contribute. The indigenous population is especially affected. An important part, but not all of the disparity, can be explained by differences in educational levels as well as the occupational sector.

The remainder of this article is structured as follows. The next section introduces the Colombian pension system, and the nature of coverage provided. This is followed by an explanation of the methodology and data and a presentation of the results. The article concludes with a discussion of the policy implications of the results.

The Colombian pension system

The current pension system in Colombia was enacted in 1994, after a reform that i) structurally changed the previously existing defined benefit social insurance programme, ii) phased out most of the myriad of special pension programmes for specific occupations, and iii) introduced a privately-administered defined-contribution option based on individual accounts.¹ In this “parallel” system, the insured choose between affiliating with one of two separate pension programmes,

1. See Casalí and Farné (2020), Kleinjans (2003), and SSA and ISSA (2020) for more details on the Colombian pension system. All but three of the special pension regimes have been phased out; those remaining have only a small number of affiliates (Kleinjans, 2003; Ministerio de Hacienda y Crédito Público, 2022).

which, for simplicity, are referred to here as the “public programme” (social insurance) and “private programme” (individual account).² The insured may switch between the programmes every five years, up until ten years before the legal retirement age.

The pension system provides coverage for private-sector and public-sector employees and also mandates self-employed workers to be insured. The insured and their employer (if any) contribute a total of 16 per cent of monthly earnings that are at least equal to the monthly minimum wage, of which 3 percentage points finance disability and survivors’ benefits as well as administrative fees.³ In the private programme, a further 1.5 percentage points of the 16 per cent contribution are allocated to the minimum pension guarantee fund, so that only 11.5 per cent of monthly earnings (equal to 72 per cent of the contributions) are deposited into the individual account. Insured persons with earnings above four times the minimum wage additionally contribute to the Pension Solidarity Fund, which subsidizes some of the contributions of low-income self-employed workers as well as *Colombia Mayor*, a means-tested social assistance pension for the poor. At the end of 2022, *Colombia Mayor* had over 1.7 million beneficiaries, each of whom received a small monetary amount that has been associated with improved food security in old age. Despite this, 44.1 per cent of beneficiaries are still considered to be poor (DANE, 2021; Hessel et al., 2018; Hessel et al., 2021; Ministerio de Hacienda y Crédito Público, 2022).

The “public” defined benefit programme is administered by a government agency, the Colombian Pension Administrator (*Administradora Colombiana de Pensiones* – Colpensiones). The pension amount depends on the number of contribution weeks and the contributory salary. The retirement age is age 62 (men) or age 57 (women), with eligibility requiring a minimum of 1,300 weeks of contributions. Retirees receive an inflation-adjusted pension that is at least 55 per cent of their career average monthly earnings (65 per cent for low-waged insured), with the minimum aligned with the current minimum wage and a higher amount payable if the number of contribution weeks exceeds the minimum required. Pension payments are made 13 times a year.

The “private” individual accounts programme is administered by private pension fund administrators who manage the investments. Retirement is possible if the total value of the accumulated funds (including returns) is sufficient to fund an annuity that pays a pension greater than 110 per cent of the minimum wage. The pension is paid at age 62 (men) or age 57 (women), with a guaranteed

2. The public programme is the *Regimen de Prima Media con Prestación Definida* (RPM), and the private programme is the *Ahorro Individual con Solidaridad* (RAIS).

3. In theory, private pension fund administrators could charge less than the 3 percentage points but in practice they do not (Superintendencia Financiera de Colombia, 2024a).

minimum pension equal to the minimum wage paid to those who have contributed for at least 1,150 weeks.⁴

The majority of Colombian workers do not contribute to the pension system. Only 48 per cent of the economically active population actually contribute to any programme at least once within any 6-month period, a low percentage that is similar across the two programmes (Ministerio de Hacienda y Crédito Público, 2022). Estimates suggest that the share of the economically active population that is either not affiliated with any pension programme or not regularly contributing is over 75 per cent (Clavijo, 2023). In the private programme, low contribution rates to the old-age pension are amplified by the deductions for disability and survivors' insurance and administration costs. Moreover, the investment returns of accumulated funds have been low, with 10-year real returns averaging between 2.1 per cent and 3.2 per cent, depending on the type of fund (Superintendencia Financiera de Colombia, 2024b; see also Salazar Guatibonza, 2019).

Of concern, at the legal retirement age many workers do not fulfil the minimum requirements to receive a pension. At the end of 2022, only 1.85 million Colombians received an old-age pension from either the private or public programme, or a special pension regime, but over 4.6 million Colombians were aged 65+ (Ministerio de Hacienda y Crédito Público, 2022; World Bank, 2023). The International Federation of Pension Funds Administrators reports the share of workers receiving a pension from either the public or the private programme at 25 per cent (FIAP, 2022).

The pension system is also costly and regressive. It is subsidized by public funds to the amount of 5.2 per cent of the Colombian gross national income (GNI), subsidies that overwhelmingly benefit affluent Colombians (Clavijo et al., 2019). The required subsidies are expected to increase over time because of population ageing (Parra-Polanía et al., 2023) and because 70 per cent of all affiliates contribute to personal individual accounts in the private programme and thus do not contribute to the social insurance financing of public pensions for those who are retired (Asofondos, 2023, referring to data for December 2022). Moreover, workers can switch to the public programme if the expected benefits are higher. If the predicted benefit rates are lower in the private programme than in the public programme, switching may be more common among those workers with higher incomes who are able to satisfy the public programme's greater number of required contribution weeks. To put the scale of the current subsidies into perspective, it would cost only 0.74 per cent of Colombian GNI to provide a

4. There are several different stipulations for affiliates who do not meet the minimum requirements to receive at least some benefits (see SSA and ISSA, 2020 for more detail).

non-contributory minimum pension equal to the national poverty line to 40 per cent of the population aged 65+ (Arenas de Mesa, 2020).

Given the well-documented problems and inefficiencies, previous Colombian governments have contemplated pension reforms, with a reduction of entitlements under the public programme and even the programme's elimination having been previously rumoured (e.g. Semana, 2020). Currently, such types of reform are off the table, following the election in 2022 of President Petro who has been critical of the private programme and has proposed a multi-tiered pension system (e.g. Mejia, 2023). Much of the associated recent discussion has focused on the low coverage of the current system as well as its lack of financial viability. To the best of this author's knowledge, none of the studies evaluating government or alternative proposals has explicitly considered current racial and ethnic inequality in the pension system or the effects of the proposed reforms on these inequalities (see also Palomino, 2023). This is a gap that this research seeks to address.

Methodology and data

To assess inequalities by race and ethnicity in pension insurance coverage, we estimate probit models in which the dichotomous dependent variable can take on three different forms: 1) whether the individual's main activity during the previous week was work; 2) whether a working individual is currently contributing to any pension programme; and 3) whether a contributing individual is affiliated with either the public or the private programme. These outcome variables assess whether individuals are eligible to contribute to a pension programme; whether eligible individuals actually contribute; and if they do contribute which pension programme they choose. Unfortunately, the data does not allow to investigate differences in contribution amounts or compare actual old-age pension receipts.

The main covariates of interest are *afro-Colombian* and *indigenous*, which are mutually exclusive dummy variables for the respective racial and ethnic self-classification. Additional control variables included in all regressions are age, age squared, age cubed, and survey year dummies. Depending on the outcome variable and the specification, also included is whether the person lives in a rural or urban area; partner status; education; and occupation to assess factors associated with racial and ethnic differences. The study further conducts estimations with outcome variables for the partner to assess whether assortative mating (e.g. in this case, partners being of the same race or ethnicity) increases inequality. All models are estimated with robust standard errors and separately for men and women because of stark differences in labour force participation and associations between covariates and outcomes. All results shown in the

figures are predicted probabilities, and those shown in the Appendix tables are marginal effects.⁵

The analysis uses data from the National Survey on the Quality of Life (*Encuesta Nacional de Calidad de Vida – ECV*) for the years 2018, 2021, 2022 and 2023.⁶ The ECV is an annual nationally representative survey of the non-institutionalized civil population of Colombia conducted by the Colombian statistical institute, the *Departamento Administrativo Nacional de Estadística (DANE)*.⁷ The ECV is aimed at assessing living standards aligned with the Living Standard Measurement Studies conducted by the World Bank and the Interamerican Development Bank. Importantly for this study, the 2018 and 2021–2023 waves included questions about whether the respondent currently contributes to a pension programme. The data from these four waves is pooled to increase cell sizes – an important consideration especially in discrete outcome models – and to reduce the impact of year-to-year variation on the estimates.

The sample is restricted to individuals aged 21+ who have not yet reached the legal pension age, do not already receive a pension, and do not have a work-impeding disability. Given the small cell sizes among some minorities, the following were dropped from the sample: Roma (101); descendants from San Andrés, Providencia, and Santa Catalina (2,100); and Palenqueros from San Basilio (161).

As there may be racial and ethnic differences in work activity – and thus pension insurance eligibility – the first set of analyses uses the sample described above. Given that pension contributions are restricted to working individuals, additional analyses use a sample restricted to working individuals (defined as those whose main activity was work during the past week). To analyse differences in pension contributions, we restrict the sample to those who work, but also show results for the sample without this restriction to assess the gap in pension contribution among the entire population. To analyse the choice between the private and the public programme, the sample is further restricted to those who contribute to one of these two programmes and omit the small number of individuals who contribute to the more generous special programmes (5,338), the subsidized fund (544), or do not know to which programme they contribute (3,199).⁸

5. This article is supplemented by an Appendix (developed by the author and made available to readers). See Supporting Information.

6. The results are not sensitive to excluding the year 2018.

7. Data produced by the Colombian statistical institute (*Departamento Administrativo Nacional de Estadística – DANE*) is publicly available at www.dane.gov.co.

8. Stata Now/SE 18.5 is used in all analyses, including the user-written packages for graphs `comcombarginsplot` and `grc1leg`.

The final, unrestricted data set includes 249,733 men and 254,699 women. Of these, 211,785 men and 102,194 women worked during the last week, and 56,265 men and 39,397 women currently contribute to any pension programme.

Results

Descriptive statistics

Important variables differ significantly by gender. Women are much less likely than men to work (40.0 per cent versus 85 per cent, respectively) but when working are more likely than men to contribute to a pension programme (39 per cent versus 27 per cent, respectively). Women have higher levels of education, and when working are more likely to work in formal employment. Indigenous Colombians are less likely to work than other Colombians and have lower levels of education. When working, indigenous Colombians are less likely to contribute to a pension programme and less likely to work in the formal sector. Afro-Colombians' characteristics typically fall between the other two ethnic and racial groups, though they are somewhat more similar to non-minorities than to indigenous Colombians, a pattern that is also reflected in the results below.⁹

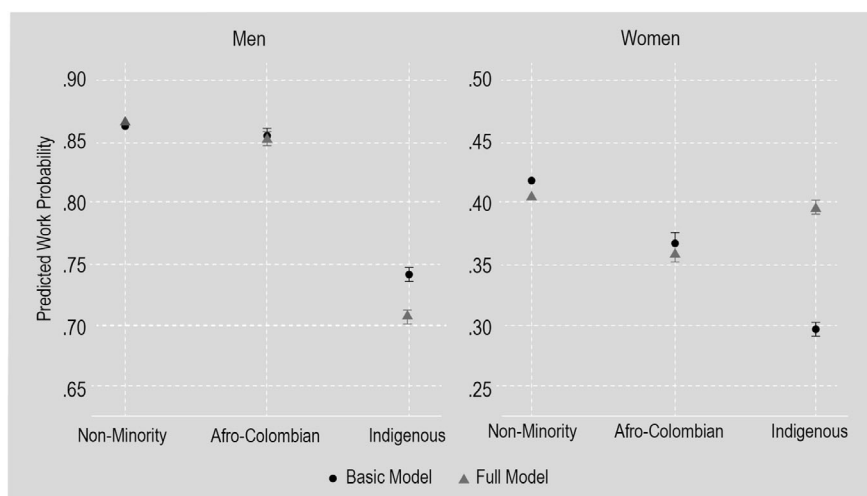
Working in the previous week

Figure 1 shows the predicted probabilities of having worked in the previous week for men and women, respectively. Note that the scale of the graphs for men and women are the same but the ranges differ because women's predicted work probability is much lower than men's. These results provide information about whether racial and ethnic inequalities may be underestimated when only considering those who worked when assessing pension insurance coverage. The *basic* models estimated include age, age squared, age cubed, dummies for race and ethnicity, and survey year dummies. The *full* model further includes dummies for urban residence, partner status and education.¹⁰

Turning first to the results for men, afro-Colombians are slightly less likely to have worked in the previous week than non-minorities, but this difference is very small compared to the share of working non-minority men (86 per cent) and

9. This article is supplemented by an Appendix (developed by the author and made available to readers). See Supporting Information. The detailed summary statistics are presented in the Appendix, Tables A.1a and A.1b.

10. This article is supplemented by an Appendix (developed by the author and made available to readers). See Supporting Information. The marginal effects are shown in the Supporting Information, Appendix, Table A.2.

Figure 1. Racial and ethnic differences in work probabilities

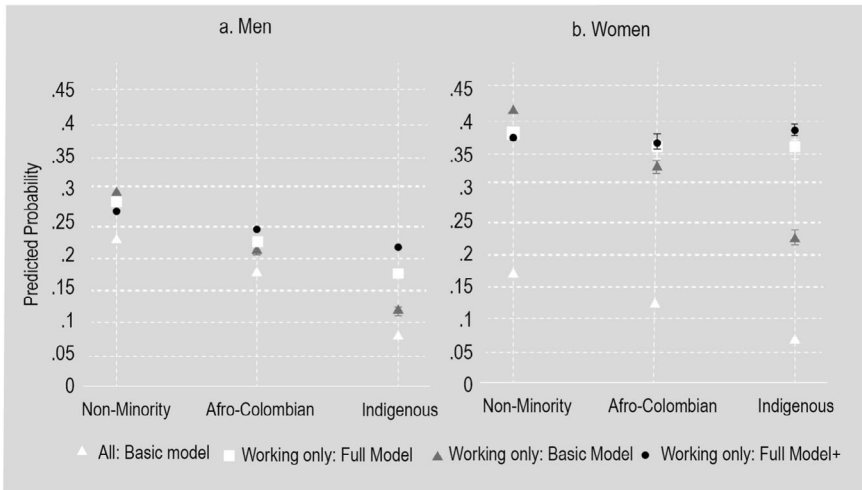
Note: 95 per cent confidence intervals shown. Basic models control for age and survey year; full models further control for rural/urban, marital status, and education. N = 249,733 (men) and 254,699 (women).
Source: Author's elaboration.

independent of the model. Indigenous men, however, are 12 percentage points less likely to work, a gap that increases to almost 16 percentage points when including additional controls. The difference is thus not explained by differences in urban versus rural residency, marital status or education.

The racial and ethnic gaps are larger among women. Afro-Colombian women are 5 percentage points less likely to work than non-minority women. Adding additional control variables explains 14 per cent of the gap in the less saturated model. Indigenous women are 12.1 percentage points less likely to work (almost 30 per cent less likely than non-minority women) if the regression includes only basic controls. Almost all of this difference (93 per cent) can be explained by residency, partner status and education. Adding each of these measures individually (results not shown) shows that this result is driven in large part by indigenous women's lower levels of education: adding education by itself to the basic model reduces the marginal effect of being indigenous by almost 70 per cent to 3.8 percentage points.

The effect of other covariates (shown in the Supporting Information, Appendix, Table A.2) differs by gender. Married men are 12 percentage points more likely to work than single men; married women are 24 percentage points less likely to work than single women. Also, contrary to men, there is a strong positive educational gradient for women whose probability of working increases with a higher level of education.

Figure 2. Racial and ethnic differences in contribution probabilities: Men and women



Notes: 95 per cent confidence intervals shown. Basic models control for age and survey year. Men: full models further control for rural/urban, marital status, and education; Full model+ additionally controls for occupation. N = 249,733 (All) and 211,785 (Working Only). Women: Basic models control for age and survey year; Full models further control for rural/urban, marital status, and education; Full model+ additionally controls for occupation. N = 254,699 (All) and 102,194 (Working Only).

Source: Author's elaboration.

Overall, these results suggest that any analysis of pension coverage that only considers working individuals underestimates racial and ethnic differences even when controlling for other demographic characteristics, especially for indigenous Colombians and for afro-Colombian women because they are less likely to work.

Pension insurance coverage

Moving on to the analysis of pension insurance coverage, Figure 2 (panels a and b) shows the predicted probabilities of contributing to a pension programme for men and women, respectively, for four different estimations: the basic model on the full sample and three models on the sample that includes only those who work: the basic model, the full model, and the full model+, which adds occupation dummies.¹¹

Considering inequalities among men, Figure 2, panel a, shows that across all specifications and samples, minority men are less likely to contribute, with the

11. This article is supplemented by an Appendix (developed by the author and made available to readers). See Supporting Information. The marginal effects are shown in the Supporting Information, Appendix, Tables A.3a and A.3b.

greatest level of inequality found between indigenous and non-minority men. Using the sample of working men instead of the full sample slightly increases inequalities. About a third of these inequalities can be explained by demographic variables (28 per cent for afro-Colombian men and 38 per cent for indigenous men), and a further third by occupation (38 per cent for afro-Colombian men and 28 per cent for indigenous men), with remaining differences in contribution probabilities of 2.5 percentage points in the case of afro-Colombian men and 5.4 per centage points in the case of indigenous men. Compared to the 28.7 per cent share of non-minority men contributing, this results in an unexplained gap of 9 per cent and 19 per cent, respectively.

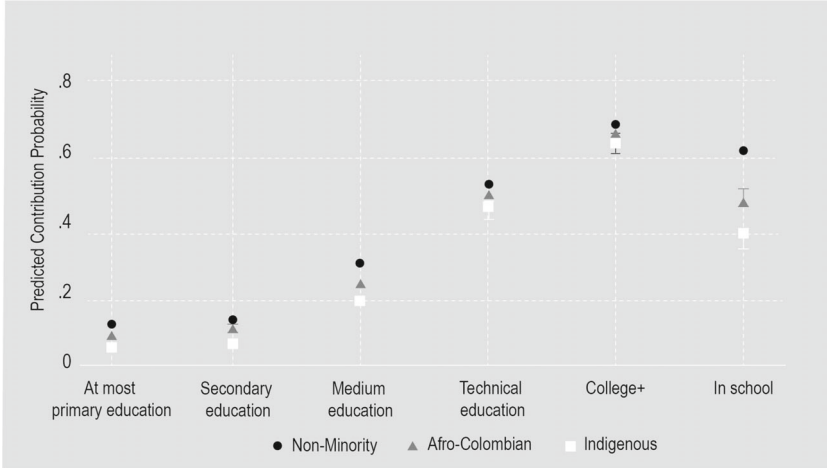
Figure 2, panel b, presents the results for women. It is recalled that the share of non-minority women who reported work as their main activity during the last week is only 42 per cent, and that minority women are even less likely to work, which is reflected in the small share of women in the full sample contributing and the racial and ethnic inequality apparent from the figure. Restricting the sample to women who work increases inequalities by over 50 per cent, showing that women from minorities are considerably less likely to contribute when working. Accounting for demographic differences considerably reduces inequalities, by over 50 per cent for afro-Colombian women and over 80 per cent for indigenous women, with a remaining contribution gap for both minority groups of about 3.5 percentage points. Further controlling for occupation reduces the remaining gap by over 40 per cent for afro-Colombian women and completely for indigenous women.

Contribution rates and education levels are strongly correlated. It is thus informative to investigate whether a higher level of education has differential effects depending on minority status. Figure 3a and Figure 3b show the predicted probabilities from the full model with additional interactions between minority status and education level for men and women, respectively. Note that educational categories are defined as having at least some education at that level and do not imply that the educational level is completed.

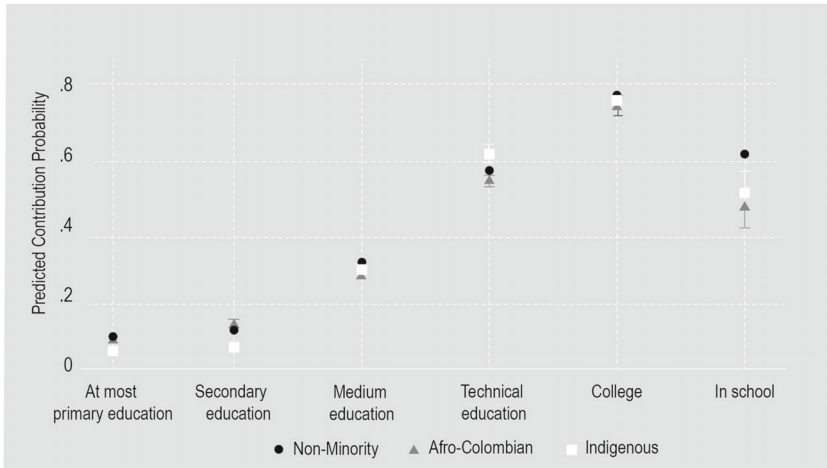
For men, Figure 3a shows a positive educational gradient for all groups. At all education levels, non-minorities have the highest contribution rates, followed by afro-Colombians, and finally indigenous men. The gradient is steeper for lower levels of education for non-minority men and the gap becomes close to, or statistically insignificant, at the two highest levels of education. This implies that increasing education at the low end – while increasing the share of minority men who are contributing to a pension programme – may not decrease inequality. This is likely related to occupational sorting, an explanation that is supported by the result of the model with occupational dummies added (results not shown), which shows increased inequality at every educational level except for those with “technical education”.

Figure 3. *Racial and ethnic differences in contribution probabilities by education*

a. Racial and ethnic differences in contribution probabilities by education: Men



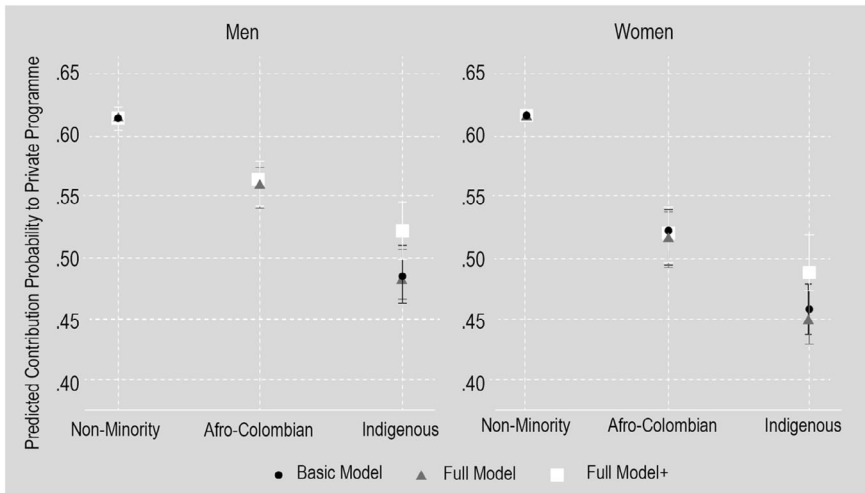
b. Racial and ethnic differences in contribution probabilities by education: Women



Notes: (a) 95 per cent confidence intervals shown. The full model controls for age, survey year, rural/urban, marital status, education, and includes interactions between minority status and education. N = 211,785 (Working Only). Note that educational categories are defined as at least some education in the respective category rather than completion. (b) Racial and ethnic differences in contribution probabilities by education: Women. Notes: 95 per cent confidence intervals shown. The full model controls for age, survey year, rural/urban, marital status, education, and includes interactions between minority status and education. N = 102,194 (Working Only). Note that educational categories are defined as at least some education in the respective category rather than completion.

Source: Author's elaboration.

Figure 4. *Racial and ethnic differences in private vs. public programme contribution probabilities*



Note: 95 per cent confidence intervals shown. The sample only includes those who work and contribute to either the private or the public pension program. Basic models also control for age and survey year; Full models further control for rural/urban, marital status, and education; Full model+ additionally controls for occupation. N = 51,101 (Men) and 35,949 (Women).

Source: Author's elaboration.

The patterns are similar for women (see Figure 3b), but with much smaller, if any, inequalities across educational levels except for those with at least some “technical education”.

Public versus private programme affiliation

Lastly, Figure 4 show the results for pension programme affiliation for the basic, full, and full+ model, with the sample restricted to those who contribute to either the private or the public programme.¹²

In all specifications, it is found that afro-Colombian and indigenous men and women are less likely to be affiliated with the private programme. Afro-Colombian men are about 5 percentage points and afro-Colombian women 10 percentage points less likely, with only small differences across specifications. Indigenous men are about 12 percentage points less likely in the first two

12. This article is supplemented by an Appendix (developed by the author and made available to readers). See Supporting Information. The marginal effects are shown in the Supporting Information, Appendix Tables A.4a and A.4b.

specifications, a difference that falls to 8.5 percentage points when we control for occupation. Indigenous women are about 16 percentage points less likely to be affiliated with the private programme when we do not control for occupation, and 12 percentage points when we do. These results suggest that minority Colombians are more likely to affiliate with the public programme than non-minorities, a difference that cannot be explained by educational and occupational differences.

The findings rely on a sample restricted to those who contribute to either the private or public programme. Afro-Colombians and indigenous men and women report a greater likelihood of contributing to a special regime or a subsidized fund – these are programmes that are more advantageous for contributors than the private and public programmes.¹³ They are also more likely to respond that they do not know to which programme they contribute. To ensure that these differences are not driving the results, the above models were re-estimated with the choice redefined as being between contributing to either the private programme or to any of the other programmes (public, special regime, subsidized fund), assuming that all those who answered “unknown” contribute to the private programme. The estimated coefficients are very similar (results not shown), with slightly smaller differences between indigenous men and women and non-minorities in the model specification that includes occupational dummies.

Which programme is the better choice depends on a variety of factors, including salary, weeks contributed, and the rate of return in the private programme – all of which are subject to uncertainty. One way to break down this decision problem is to focus on the expected number of weeks contributed at retirement age. If expected contributions lie between 1,150 weeks and 1,300 weeks, the minimum requirements of the private programme are satisfied but not those of the public programme. Hence, these individuals should choose the private programme, whether they would benefit from the minimum pension guarantee or not. For individuals contributing more than 1,300 weeks the choice depends on the interest rates, contributed weeks and salary. According to Colombian Central Bank research (López and Sarmiento, 2019), if returns are equal to the real return in the private programme since its inception (about 4 per cent), in the public programme the replacement rate is greater with few exceptions (such as for a very high number of contributed weeks or very high salaries). For those without the minimum number of contribution weeks, there is little difference except for the case in which an individual is eligible for a family pension. In this case, the trade-off is the same as for 1,150 contributed weeks and 1,300 contributed weeks (see SSA and ISSA, 2020 for more detail). One might expect that the option

13. See Supporting Information, Appendix, Tables A.1a and A.1b.

to switch between programmes within ten years of the mandatory retirement age would simplify the decision problem. There is, however, the political risk that legislative changes may remove this possibility or tighten the conditions before individuals have made their desired switch, adding another element of uncertainty (Kleinjans, 2003; Mesa-Lago, 2020).

Without information on contributed weeks by ethnicity and race (which to the best of the author's knowledge are not publicly available) it is not possible to assess whether or how much the patterns in the data are related to differences in circumstances or different decisions in similar circumstances for minority and non-minority Colombians.

The effects of the COVID-19 pandemic

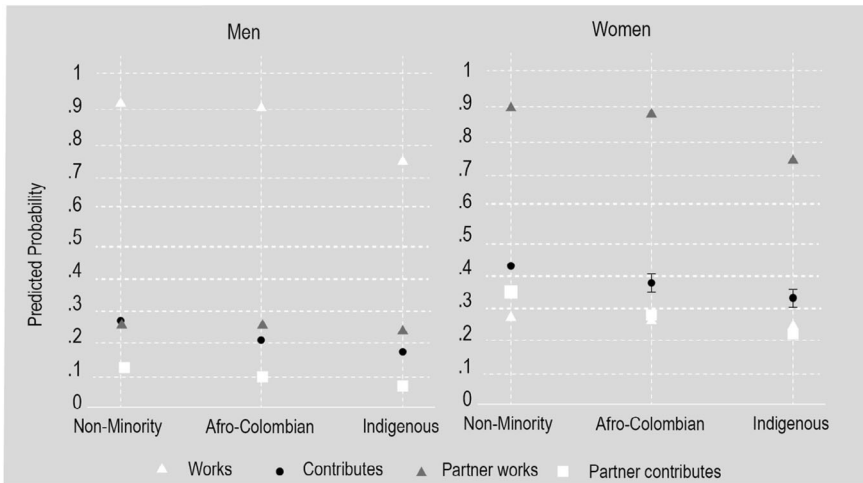
As of March 2023, Colombia had seen over 6 million cases of COVID-19 and over 142,000 deaths, a rate of 283 per 100,000.¹⁴ To explore whether racial and ethnic inequalities in work status and pension contribution and affiliation have changed between 2018 and 2023, the models were re-estimated with the full set of covariates, with added interactions between race and ethnicity and survey year.¹⁵ Indigenous Colombians are more likely to work in 2023 than in 2018 and afro-Colombian women are less likely to work after 2018. Among those working, the probability of contributing to any pension programme has decreased since 2021, with a potentially slight rebound for women. Contributions to the private programme versus the public programme have decreased for all groups, with a potentially u-shaped pattern for men and women. One possible explanation for this pattern could be a shift from formal to informal employment as a result of the pandemic. This is supported by changes in reported firm size in the ECV between 2018 and 2023. Results of the full model on workers with the dichotomous outcome of working in a “*Micro-empresa*”¹⁶ – the company size with by far the highest share of informal workers – shows that men are 3 percentage points and women 4 percentage points more likely to work in such a company in 2023, compared to 2018. In that same time frame, a full model on the complete sample further finds that the share of individuals whose household head reports considering themselves to be poor increased by 13 percentage points for men and 15 percentage points for women, compared to a baseline in 2018 of 45 per cent and 58 per cent of men and women, respectively (results not shown).

14. See *New York Times*. 2023. *Coronavirus New York Times Database*.

15. See Supporting Information, Appendix, Figures A.1 to A.3.

16. According to DANE (2024), 85 per cent of workers in companies with ten workers or less are informal workers, a share that is almost three times higher than at the category with the second highest share, those with 11–50 workers (with a share of 22.3 per cent) (DANE, 2024).

Figure 5. Consequences of assortative mating



Note: 95 per cent confidence intervals shown. Basic models. Please see Supporting Information, Tables A5a and A5b, for specification and sample sizes.
 Source: Author's elaboration.

Assessing the effects of assortative mating

The result show that both men and women from racial and ethnic minorities in Colombia are less likely to work and less likely to contribute to any pension programme across almost all model specifications. This difference is amplified at the household level because couples match along racial and ethnic characteristics. Among those in the sample living with a partner, 88 per cent of the indigenous Colombians are partners of someone who is also indigenous Colombian, and 83 per cent of afro-Colombians have partners who are also afro-Colombian. To assess this formally, we estimated the above models for those partnered. Figure 5 shows the results for the least saturated models for partnered men and women for the following outcomes: whether the individual works; the spouse works; the individual contributes; and the spouse contributes.¹⁷

As expected, inequalities increase when considering couples. Afro-Colombian men and women as well as indigenous men and women who are partnered are less likely to work and, if they work, less likely to contribute to any pension system compared to non-minorities. Minority men and women are also less likely to have a spouse who works, and their working spouses are less likely to contribute to any pension programme. The only exception is afro-Colombian

17. For the marginal effects, see Supporting Information, Appendix, Tables A.5a and A.5b.

men, who as individuals as well as partners are as likely to work as non-minority men. Looking at couples as an economic unit thus increases inequality rather substantially. This effect is especially large for the indigenous population.

Concluding remarks

This article analyses racial and ethnic inequalities in the Colombian pension system. Afro-Colombian and indigenous Colombians and their spouses are much less likely to contribute to any pension programme than non-minorities. Much – but not all – of this difference is related to low levels of education in minority communities coupled with activity in occupations with less access to the pension system. Indigenous Colombians are moreover less likely to work in the first place, further reducing their pension coverage. The fact that the Colombian pension system is highly subsidized by public funds further increases racial and ethnic inequalities, because only a small share of subsidies is provided in the form of small social pensions.

While possible changes to the current pension system that would address its low coverage and high fiscal costs have been in public discussion since its inception in 1994, racial and ethnic inequalities (and how any reform might affect those) have not been a focus of consideration. The above results suggest that any changes to the pension system that increase access and the affordability of pension contributions for those working in the informal economy are likely to help decrease ethnic and racial disparities, but only as long as they do not also negatively affect the coverage and contribution amounts of those who are currently contributing (e.g. Clavijo, 2023). While a higher level of education is predicted to increase pension contributions, this is not likely to decrease ethnic and racial inequality in access unless differential access to pension insurance by occupation is also addressed (see also Sánchez Torres, 2020). This study further highlights the importance of studying racial and ethnic inequality, and the collection and public distribution of data that can be used to design and evaluate policy proposals aimed at reforming the Colombian pension system.

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Supporting information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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BOOK REVIEW

Orsitto, David. **Varieties of equality in European welfare states: A multidisciplinary approach to redistribution.** Northampton, MA, Elgar, 2024. 170 pp. ISBN 9781035343676.

David Orsitto opens this multidisciplinary work by arguing that innovative ideas about social policy should contend with the loss of equality, or the trend toward more income and wealth inequality, in industrialized countries. The goal is thus how to bring back equality in the context of welfare state policies. To achieve his goal, the author discusses the idea of equality from a philosophical, economic and political standpoint and combines a theoretical/philosophical background with a model based on economic and political data and evidence. The model seeks to answer the question “What is equality today?”.

In the Introduction, the author argues that “today equality comes in varieties according to two main factors: the focal variability of equality, and the normative context of social justice. Different combinations of these two variables offer different final concepts and pursuits of the principle of equality” (p. 7, p. 8). Orsitto’s job is to gather the different disciplinary approaches under the same framework and provide an answer to the question outlined above.

Offering a definition of equality has engaged philosophers, sociologists and economists, among many others, for millennia. In this volume, we see an attempt to conceptualize and define diverse types of equality and provide their philosophical foundations, with sections dedicated to John Rawls, Robert Nozick and Frederick von Hayek, as well as Amartya Sen and Martha Nussbaum. In these sections the author sets his goals as being to define “what” is equality and “how” is it pursued. Subsequent sections on Norberto Bobbio and Isaiah Berlin focus on the concept of liberty and its impact, followed by a discussion of Popper, Constant and Dumont.

For those of us who accept that social protection is a fundamental human right, Chapter 3 offers a welcome definition by the author of the welfare state as a human rights enforcer. Here, Orsitto traces an effective history of the welfare state and its development since the end of the Second World War, affirming the welfare state as “an enforcer of socioeconomic rights in industrialized countries” (p. 65). After a brief review of the literature, Orsitto directs the reader to Esping-Andersen’s *The Three Worlds of Welfare Capitalism*. As will be well known to many readers of this journal, the often-called *Three Worlds Model* argues that the nature of social policy depends on the nature of class mobilization, class-political action structures, and the legacy of regime institutionalization. Ultimately, Esping-Andersen argues that there are three types of welfare programmes: liberal, conservative, and social democratic, and that each one shapes policies and expenditures according to their own rules and institutional arrangements. As such, each also contains and pursues different definitions of equality and approaches the subject with different intensity and determination.

The book then turns to the impact of globalization and asks what has happened to welfare state policies in the current era of globalization. Clearly, since the end of the Soviet Union, defined as marking the beginning of the current phase of globalization, trends have seen a reduction in some social programmes and a tendency to define welfare state spending as unsustainable. These trends have been accompanied by a shift toward privatization and laissez-faire policies greatly influenced, at least in some world regions, by economists at the University of Chicago. In practice these shifts have altered the emphasis towards efficiency and savings, with a relative downgrading in the importance of the concept of equality. In turn, these policies have laid the groundwork for the increases in inequality witnessed worldwide. However, it is important to note that the author treats the current era of globalization as one of diminished commitment to the welfare state – while this reviewer would argue that current globalization may be more firmly characterized as a new era of retrenchment and competition, both of which have undermined further the commitment to the welfare state and its essential policy aims.

To corroborate the author's position that globalization has diminished the commitment to the welfare state and equality, Chapter 4 focuses on measurements and the pattern of inequality growth. Specifically, Orsitto sets out to define the concept of equality and the manner this is being pursued that can be attributed to industrialized country welfare states. His data shows that of the 23 countries analysed, only 12 countries in Northern Europe and Nordic Europe are pursuing redistribution that is defined as both committed and efficient; while the other countries, including the Mediterranean and Eastern Europe countries, are either efficient-uncommitted, inefficient-uncommitted, or inefficient-committed. The data indicates that the higher the commitment to transfers is, the higher the degree of redistribution.

It is important to underline that most of the data covers the period from 1995 to 2021 and might not have taken into account the observed reductions in social spending-to-GDP ratios in many countries that have followed the short-lived increases in response to the COVID-19 crisis.

The key question, however, is why the countries in Northern Europe and Nordic Europe are much more committed to equality than their peers in Southern or Eastern Europe. For this reviewer, the answer lies in the old trade-off between communitarianism and individualism. But Orsitto, in an unexpected turn in his conclusion, argues that "countries that have lower-than-average levels of social spending and redistribution tend, in fact, to be collectivist ... However, the social policy of libertarian countries such as the United States and Iceland aligns with that of the collectivist countries" (p. 136). While I cannot speak for Iceland, I can firmly argue that with the exception of the old-age, disability and survivors' programme (Social Security), which is a federal programme, the dismembered, racially biased, and often state-based system of social policy in the United States does not follow a collectivist approach or resemble the universal-type of policies followed in the Nordic countries. Moreover, the individualistic approach followed by the United States has led to the exclusion of the neediest groups – as is the case, for instance, of the welfare policy, or Temporary Aid for Needy Families (TANF).

In the book's concluding statement, Orsitto argues that equality is a relative concept, and that Nozick, Rawls, Sen and Nussbaum are those who have most influenced welfare state ideas. He also argues that all welfare states redistribute wealth from the top 10 per cent to other income strata. His conclusion regarding how inequality is pursued relies on the attitudes and orientations of political leaders. While all these answers may be true, they fail to offer the reader anything new in terms of insights. This is unfortunate given that trends in Europe as elsewhere are emphasizing individualism,



which not only undermines the principles of the welfare state, but also the stability of democratic institutions that are essential to social and economic development and which have enabled progress towards the realization of greater social justice during the last eight decades.

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