Public Pension Design and Household Retirement Decisions: Cross-national Comparisons

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This project aims to document cross-country responsiveness to international social security programs' incentives for household work using cross-country harmonized survey data, with a particular focus on auxiliary benefits (i.e., benefits paid to another person) for the spouse and survivor of the primary earner. It is a work in progress. Understanding present day responsiveness to incentives embedded in Social Security's benefit structure is a critical step towards determining the cost implications of retirement reforms.

In the past 35 years, there has been limited policy variation of Old Age and Survivors Insurance (OASI) benefits in the United States. Examining household work and savings behavior under alternative institutional structures will enable policymakers and researchers to learn from other countries' social insurance experiences.

Background

Economic theory suggests, and past research validates, that household choices respond to key elements of the benefit structure, such as benefit eligibility ages and the growth in the benefit from further work. Social security systems in many countries provide strong incentives to stop working at older ages and observed labor force behavior is associated with those incentives (Gruber and Wise, 1999).

The importance of the benefit structure for household work and savings will depend, in part, on household characteristics and preferences such as the value of the retirement benefit relative to forgone earnings and the disutility of labor. Yet past cross-country work has not focused on other common elements, such as benefit reductions for work while collecting benefits or auxiliary benefits for spouse and survivors. Responsiveness to these elements of benefit structure may be more limited due to the

complexity of these benefit rules and the bounded rationality of households. In a study surveying potential Social Security recipients and contributors, Carman and Hung (2018) find "that while many are aware of spousal and survivor's benefits, knowledge about eligibility and benefit amounts is relatively low." Spouse and survivor benefits reflect a substantial cost for the social security system costing in 2017 approximately $20 billion in spouse benefits and $60 billion in survivor benefits for non-disabled widows.[1]

Benefit Design

In the United States, Social Security household benefits are dependent on both the primary and secondary earners' current income and earnings over each person's work history. Generally, the secondary earner in a married household will be entitled to receive the greater of 50 percent of his or her spouse's benefit or 100 percent of his or her own benefit at full-retirement age (FRA). If the primary earner dies, the secondary earner in a married household will be entitled to receive the greater of 100 percent of his or her spouse's benefit or 100 percent of his or her own benefit at FRA. This system carries over to divorce, with additional requirements related to length of marriage and remarriage. Additional complexities exist related to starting benefits before/after FRA.

This design has implications for each household member's incentives to work. Consider two households – one where each member is entitled to $1000 at FRA based on their own earnings records, and the other where one member is entitled to $2000 and the other $0 based on their own earnings records. While both household members

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[1] Author's calculations based on the Annual Statistical Supplement, 2018 (ORES, 2019).

are alive, the first household will be entitled to $2000 per month, whereas the second household will be entitled to $3000 per month. If the primary earner dies first, then the first household would be entitled to $1000 per month (or 50 percent of the original entitlement) and the second household would be entitled to $2000 per month (or 66.7 percent of the original entitlement). All else equal, there are at least two major incentives for forward-looking households following from this design that influence work decisions based on differing household work history: (1) in the dual income household, each member's decision to work is independent of their spouse, while, in the single income household, the primary earner has a strong incentive to work whereas the secondary earner has no incentive to work, and (2) when one of the household members dies, the dual income household experiences a greater reduction in Social Security benefits, which encourages the spouse expecting to live longer to continue working and saving.

Countries differ in how they approach auxiliary benefits for spouses and survivors. The spouse benefit system in the US is rare. Some countries have fixed spouse benefits for spouses not entitled to a benefit based on their own earnings history (e.g. South Korea) while others have split entitlements that usually arise only in the case of divorce (e.g., Germany). In the case of split pensions, pensions of the spouses are calculated by splitting the pension rights accrued by both members of the couple during their marriage. Most countries offer survivor benefits, but their design can differ significantly, with some dependent on the primary earner's work history (e.g., Italy), while others reflect a fixed amount (e.g., the Netherlands).

Data and Approach

We use survey data from the global family of Health and Retirement Studies (global HRS). The global HRS surveys provide a common set of household and individual information, including: demographics, health, financial and housing wealth, income, health insurance, family structure, retirement plans and expectations, employment, and cognition. The Gateway to Global Aging works with the country studies in the global HRS to harmonize data and has created 11,540 key harmonized variables from 12 surveys in the global HRS covering 30 countries. As part of a parallel effort to this study, the research team is creating newly harmonized measures for retirement incentives as part of the Gateway to Global Aging (NIA grant R01AG030153), which it will apply in this study.

To understand if Social Security benefits influence work behavior across countries, individual and household benefit levels need to be consistently identified, which is the main motivation for using the global HRS surveys that have followed a common set of standards in survey design. Across countries, common inputs into a public pension benefit formula for an individual's own benefits include his or her social security contribution and earnings history, benefit claiming age, and birth cohort. Social security wealth and work incentives by claiming age are estimated based on modeling each country's benefit formula, collecting survey information on birth cohort, and estimating work history based on survey information. A current challenge in this study involves applying the methods consistently across surveys, so that measured responsiveness is not due to survey design differences. Knapp et al (Forthcoming) review various ways of computing benefits using the global HRS data and compare

them to administrative data in the US HRS survey that is linked to Social Security data. While a consistent method for computing benefit incentives is found for men, the approach over-predicts lifecycle earnings for women, biasing up estimates for own benefits and down estimates for auxiliary benefits. We expect this is due to women being more likely to have breaks from work related to child-bearing and rearing. Since women compose a substantial majority of the spouse and survivor benefit recipients, resolving the estimation of their lifecycle earnings is critical for this research. The next step in our research is developing a method of estimated female lifecycle earnings that can be consistently implemented across the global HRS surveys.

Once benefits can be consistently predicted for a household, we will compute a forward-looking pension incentive measure that reflects pension benefits gained if an individual chooses to work an additional year, known as peak value (Gruber and Wise, 2004). The peak value measure reflects the difference between the present discounted value of social security benefits at the maximum value (typically a future claiming date, such as the FRA) and at current level if benefits were claimed immediately. Incorporating the peak value of own benefits allows the estimation of the relationship between working an additional year and the gains in future social security benefits from delayed claiming and continued work. Past research (e.g., Gruber and Wise, 2004) has indicated greater own benefits from delayed claiming are related to continued work. We will update previous findings with harmonized global HRS public pension incentive measures. Additionally, by also estimating peak values for spouse and survivor benefits, we will be able to evaluate whether an additional dollar from auxiliary benefits is the same as an additional dollar in a recipient's own benefits.

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