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Social Security and Wealth Accumulation in Developing Economies: Evidence from the 1981 Chilean Reform

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Summary. — Wealth holdings are particularly important in developing economies as they allow individuals to insure themselves against income shocks in the absence of developed financial markets. In this paper, we test whether the existence of future social security benefits impacts wealth holdings by using the 1981 Chilean social security reform. Our estimates are based on the EPS 2004, which contains detailed data on wealth holdings (assets and liabilities) and social security account balances. By means of different econometric methods, we find no impact of social security on wealth accumulation, with the exception of poorer individuals. In that case, each additional peso in social security wealth depresses other types of wealth by almost 0.1 pesos, mainly in regard to real estate.

Key words — wealth, social security, Latin America, Chile

1. INTRODUCTION

People accumulate assets for two main reasons: to smooth consumption over their life cycle and to buffer unexpected income/expense shocks. In developing economies, wealth accumulation is particularly important as people usually do not have a large set of instruments available to insure themselves against income shocks, contrary to developed economies.

One element that should be considered in the study of wealth accumulation is the social security system. There is some evidence, generally focusing on developed economies, showing potential negative impacts of the PAYG social security systems on wealth accumulation. In that case, social security programs might leave individuals less protected against income/expense shocks.

The impact of social security on wealth accumulation is not clear. On the one hand, views in theories are contradictory. The life cycle model predicts that larger future benefits to be received from the social security system upon retirement will increase current consumption, and thus depress savings and asset accumulation. Furthermore, if future social security benefits are perceived as good substitute to future wealth, the impact on current wealth might be great. Conversely, the dynastic family set-up predicts that greater social security benefits are associated with higher future taxes and, therefore, wealth accumulation does not vary. On the other hand, the empirical evidence, which is mainly obtained from developed economies, is also inconclusive.

The above discussion relates to the "Pay-as-you-go" (PAYG) social security system, which is one of the social security designs most used around the world. However, individual account (IA) social security systems are becoming a subject of increasing interest as countries are switching from PAYG systems to IA systems.

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The relation between the IA system and wealth accumulation is also unclear and this lack of evidence is a problem faced by policy agents when analyzing the effects of reforming the PAYG social security system through a possible privatization. Thus, evidence on the impact of the PAYG and IA system on wealth accumulation is currently an important input for policy makers in developing economies.

In this study, we analyze the impact of the PAYG system and the IA system on individual wealth accumulation by providing evidence from Chile. We focus on Chile because it was one of the first countries switching from a PAYG system to an IA system. Furthermore, the 1981 Chilean social security reform allowed some individuals to remain affiliated to the old PAYG system while other individuals switched to the IA system. Hence, in Chile, individuals affiliated to the old PAYG system coexist with individuals affiliated to the IA system. This characteristic allows us to disentangle the impact of both types of social security on wealth accumulation by using Chilean micro-data. On the other hand, we have a rich dataset available that includes information on an extensive number of different instruments to accumulate wealth. While there are a large number of surveys available in Chile since the social security reform, the particular survey we use is the unique survey containing information both on the social security system and the wealth accumulation. [1]

Initially, we run OLS regressions and later we provide IV regressions to correct for the potential self-selection of individuals between social security systems. Next, we provide estimates by sources of wealth and later we study how our results differ by socioeconomic characteristics of individuals.

This paper is developed in the following way: Section 2 makes a brief review of the theory and the empirical evidence on the topic. Section 3 discusses the Chilean historical background while Section 4 discusses the data and the empirical strategy. Section 5 discusses the results and Section 6 concludes.

2. PREVIOUS EVIDENCE

Feldstein (1974) inaugurated the debate on the influence of the PAYG over savings and asset accumulation. He focused on a life cycle model with a PAYG social security system in which greater future benefits increase current consumption but depress savings and asset accumulation. Barro (1974) provided a different argument and indicated that the social security system should not have an effect on savings and wealth because in his Ricardian analysis, greater current PAYG benefits are associated with higher future taxes.

The evidence reported in the literature focuses on developed economies and is generally obtained from time series and cross-sections of countries or household surveys. Feldstein (1974), using United States aggregate data, found that the marginal propensity to consume social security wealth was 2.1%. Hence, savings were significantly depressed by social security benefits. The international evidence is quite mixed. Feldstein (1977, 1980) found negative impacts of social security on savings. In his 1980 study, he used social security benefits from twelve industrial countries elaborated by the United States Social Security Administration and found a negative impact on the savings rate of the benefit-to-earnings ratio. However, Barro and MacDonald (1979) found mixed evidence using an international cross-section of countries. In their analysis of time series, they found a positive relationship between aggregate consumption and social security wealth. However, using cross-section data, they found a negative association.

On the other hand, Feldstein and Pellechio (1979) used the 1963 Survey of Consumer Finances (SCF) to find a considerable negative impact of social security wealth. [2] Novos (1989) provided a sensitivity analysis to Feldstein and Pellechio's approach by excluding farm operators and by changing the criteria to assign individuals to percentiles in the income distribution. In that case, the negative impact of social security wealth on wealth accumulation is no longer significant. Gullason, Kolluri, and Panik (1993) provided microeconometric evidence using data from the 1983 SCF, which contains more information concerning assets and liabilities than the 1963 SCF used by Feldstein and Pellechio (1979) and Novos (1989). Their results are similar to the results on Novos (1989). Gustman and Steinmeier (1999) also provided evidence of no impact of pensions on wealth for the United States by using detailed data from the Health and Retirement Study.

The literature has also examined the effects of the IA system on wealth accumulation. Kotlikoff (1995) argued that privatization may have ambiguous effects. On the one hand, the