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Macroeconomic implications of early retirement in the public sector: The case of Brazil

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ABSTRACT

In Brazil generous public sector pensions have induced civil servants to retire on average at age 55. In this paper we assess the efficiency gains from eliminating such policy induced early retirement in a two-sector overlapping generations economy. We find the adverse effects of that policy are significant. Specifically, the generosity of public sector pensions which induces civil servants to retire 5 years prematurely (at age 55 rather than at age 60) is often associated with decreases in steady state output (GDP) of almost 3% and welfare losses in the private sector of more than 3% of consumption.

0. Introduction

'Early' retirement has become common in the industrialized economies. Blöndal and Scarpetta (1998) report that the effective retirement age in the European Union for men has dropped from about 66 in 1960 to about 61 in 1995, even though life expectancy has increased by roughly 7 years in this period. The retirement age for women has experienced a similar drop. Explanations for the drastic increase in early retirement can be found in Gruber and Wise (1998, 1999), Blöndal and Scarpetta (1998), Visco (2000), Herbertsson (2001), Blundell et al. (2002), Herbertsson and Orszag (2003), Conde-Ruiz et al. (2005) and Wise (2005). The literature has established a credible empirical link between the design of pension systems and early retirement decisions.[1] The costs of early retirement have been estimated to be 7.1% of GDP in 2000 and up to 9.1% of GDP in 2010 for the OECD average (compare Herbertsson and Orszag, 2003).

The literature on early retirement for the most part has focused on the industrialized world and ignored developing countries. While this emphasis is justified to some degree, generous pension schemes and early retirement issues are not

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[1] Michel and Pestieau (1999), Ahituv and Zeira (2000), Cremer and Pestieau (2003), and Fehr et al. (2003) among others, use overlapping generations models to study how social security policies influence retirement decisions. Rust and Phelan (1997) and Jimenez-Martin and Sanchez (2003) estimate life-cycle models with social security programs to assess the impact of these programs on retirement behavior. Kopecky (2005) argues that early retirement among males in the US can be explained by an increase in the real wage and a decrease in the price of leisure goods.

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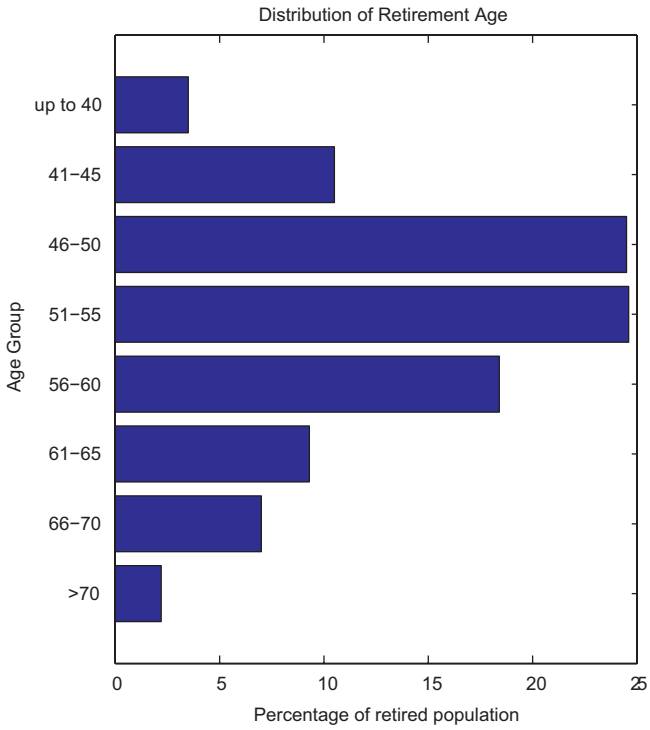

Fig. 1. Distribution of early retirement per age group in the public sector. Source: Ministry of the Budget and Administration, 2002.

wholly absent in developing countries. In Brazil for example, the public sector pensions rank among the most generous in the world. Public sector pensioners account for about 5% of all pensioners, yet receive about 50% of the value of all pension payments. The average contribution rate to public sector pensions is 11% and much lower than the 27% contribution rate in the urban private sector.

In Brazil, the constitutionally guaranteed provision of 'integrality' ensures that public sector pensions match the income in the year of retirement of the civil servant. This tends to be the maximum income in the career of a civil servant since pay grades are a function of seniority.[2] The provision of 'parity' ensures that pension payments are indexed to wages of current civil servants. After retiring from the civil service, workers are allowed to accept jobs in the private sector and receive public sector pensions simultaneously. As a consequence, civil servants retired on average at the age of 54 in 2002 (it was 49 in 1988). Fig. 1 illustrates the retirement age distribution of civil servants of the federal government.[3] In addition, there have been serious fiscal consequences of generous public pension schemes for civil servants. According to Souza et al. (2004) the deficit of the public sector pension system amounts to 3.5% of private sector output.

There is a relatively small literature studying the macroeconomic effects of pension reform in developing countries generally or in Brazil specifically. Ferreira (2004) studies social security reform in Brazil in the context of a small open economy. He finds large welfare gains from social security reform. Ferreira (2005) studies the redistributional effect of social security reform along the transition in Brazil. Glomm et al. (2006) study the macroeconomic effects of generous public sector pensions, concentrating on opportunity costs of foregone public education expenditure and infrastructure investment. These studies abstract from early retirement effects.

In this paper we investigate the effects of generous pensions for civil servants. We use an overlapping generations model where a period is 5 years and where individuals become economically active at age 20 and die for sure at age 90. The government hires civil servants and invests in a public capital which are combined to produce a productive public good. Retirement among civil servants may occur endogenously depending on the design of the pension system. Upon early retirement civil servants are free to pursue employment in the private sector. All government expenditures are financed by taxes on labor, consumption and capital income. We calibrate the model to data from Brazil. We calculate steady state equilibria as well as transition paths between pre- and post- reform steady states.

We find that the efficiency gain from eliminating such policy induced early retirement in the public sector is substantial. Specifically, the policy reform, which decreases the generosity of public sector pensions, and simultaneously increases the minimum retirement age of civil servants from age 55 to 60, increases steady state private sector output by about 3% when

[2] This level of generosity was even surpassed in the military and police force, where the first pension payment matched the highest salary one pay grade higher. Phantom promotions just before retirement may contribute even more to the generosity of public sector pensions.

[3] In 1998, a minimum retirement age for civil servants was established at age 53 for men and age 48 for women.