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How Public Pension affects Elderly Labor Supply and Well-being: Evidence from India

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Summary. — I study the effect of a recent expansion in India's National Old Age Pension Scheme on elderly well-being. Estimates suggest that public pension has a modestly negative effect on the employment of elderly/near elderly men with a primary or lower education but no effect on the employment of similar women. Pension raised family expenditures, lowering poverty, and the effect was smaller on families headed by illiterate persons suggesting lower pension coverage of this most disadvantaged group. Further, I find that households spent most of the pension income on medical care and education, suggesting possible intra-family transfers across generations.

Key words — pension, poverty, India, elderly employment

1. INTRODUCTION

Industrialized countries have been experiencing a gradual aging of populations for several decades. In developing countries, aging is a more recent phenomenon that is outpacing the rise in the elderly population in the rich world. The trend is projected to continue such that in 50 years 80% of the elderly will be living in developing countries. Developing countries thus have less time to prepare and adjust to the consequences of aging than did industrialized countries (United Nations, 2010). The elderly experience high incidence of poverty and deprivation of basic services (Barrientos, Gorman, & Heslop, 2003; Jeyalakshmi, Chakrabarti, & Gupta, 2011, Lloyd-Sherlock, 2002). Yet, programs to address elderly poverty in most middle and low income countries are small and meager, and there is limited knowledge about how transfer programs for the elderly affect their wellbeing.

The objective of this paper is to investigate the effects of India's Old Age Pension Scheme, a non-contributory pension program, on elderly employment and family expenditures. India's elderly population, at 100 million in 2011, is the second largest in the world (Ramakrishnan, 2011). Until recently, social security was non-existent for a vast majority of India's elderly, who predominantly work in the informal sector where there is no mandatory retirement. In the absence of adequate savings and pension, most people in the informal sector work past the conventional retirement age (Mathew & Rajan, 2008; World Bank, 2001). In 2007–2008, for instance, 56% of men aged 65–74, and 21% of men aged 75 or above, with a primary or lower education, worked for a living. For those who cannot work or are engaged in unpaid domestic chores, the extended joint family system is the only economic support. Rapid economic and social changes in recent years, including migration of non-elderly adults and urbanization, however, have weakened the foundations of the joint family system, leaving the elderly in vulnerable economic conditions (Pal & Palacios, 2011; Rajan, 2007).

In 1995, under the National Old Age Pension Scheme (NOAPS), the Indian federal government started providing a paltry monthly pension of Rs. 75 ($8 in 2006 purchasing power parity) to persons aged 65 or above with no regular income or family support. [1] In 2006, the pension amount was increased to Rs. 200 ($22 in 2006 PPP) and the program was expanded to cover all elderly persons in households with incomes below the federal poverty line, thereby almost doubling the coverage. In the same year, several state governments supplemented federal pension by raising state pension amounts such that in 2006–2007 the total pension for the elderly poor ranged from Rs. 200 to Rs. 1000 ($22–$108 in PPP) across states. Further, due to differences in age eligibility by gender and across states, the 2006 pension increases varied by age–gender–state categories.

What has been the impact of NOAPS on elderly employment and family expenditures? This question is important to determine the efficacy of the NOAPS. I apply the 2006 expansion in NOAPS to answer this question, adopting a methodology that allows controlling for, in a parsimonious manner, other economic and social changes that may have potentially influenced the employment and incomes of the elderly. The effects of the pension policy will be modest if there is diversion of pension funds to individuals who are not the intended beneficiaries (e.g., non-poor persons). This is a critical issue afflicting many social welfare programs in India. I investigate the effect of NOAPS expansion on elderly persons who are illiterate and have high incidence of poverty. If the program has not had any employment or expenditure effects on this group or had relatively low effects that would be evidence of their exclusion from the pension program.

The long-term viability of NOAPS is linked to its impacts. India's elderly population is projected to triple by 2050, a rise greater in proportion than the projected increase in elderly population in the rest of the world (Nayar, 2009; United Nations, 2010). Further, in recent months the government has proposed to expand the program to cover all elderly persons (Ali, 2012; Kaushal, 2012). Such large scale expansion of public pension would not be justified if it did not improve elderly wellbeing.

To briefly review the results, I find that the public pension program in India has had only a modest effect on elderly employment, but a large positive impact on household expenditures, thereby lowering elderly poverty. The employment effect is much lower than what has been observed in studies

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of most high and middle income countries (de Carvalho Filho, 2008; Gruber & Wise, 2002, 2004). It could be that the pension amount under NOAPS is too low to induce large scale retirement. My back-of-the-envelope calculation suggests that the pension amount should be at least Rs. 1000 ($100 in 2006 PPP), more than three times the national average in 2007–2008, for the program to cause retirement effects comparable to those observed in rich countries. I also find that most of the increase in family expenditure has been in education and health care, suggesting that NOAPS improved elderly wellbeing (e.g., their health and education) and it may have inter-generational payoffs in so far as the increased family expenditures improved the health and education of younger family members. This later inference is in line with previous research in developing countries that have found inter-generational benefits of elderly pension (Ardington, Case, & Hosegood, 2009; Duflo, 2003). Finally, there is some evidence that illiterate elderly persons were more likely to be left out of pension coverage suggesting that more attention needs to be paid to improve coverage of this highly vulnerable group for the NOAPS to make an effective dent on elderly poverty.

2. BACKGROUND AND POLICY CONTEXT

A rich body of research has investigated the effects of pension programs on the employment and retirement decisions and incomes of older workers in the industrialized world. These studies document that social security programs lower poverty and create incentives for early retirement. Evidence from rich countries, however, has relatively limited application for developing countries that have different resource constraints, institutional settings, and policy environments. Moreover, current policy concerns in rich and developing countries are not the same. For instance, most developed countries have relatively well-established programs for social security and elderly care. In low and medium income countries, on the other hand, development programs mostly focus on non-elderly populations and programs for the elderly poor, where they exist, are often meager and deficient (Llyod-Sherlock, 2002). The goal in many developing countries, including India, therefore, is to build programs that supplement the incomes of the elderly poor and enable them the option to retire (Barrientos *et al.*, 2003, Lloyd-Sherlock, 2002). In rich countries, on the other hand, policy makers are concerned with the long term viability of social security and policy discussion hovers around adjusting minimum retirement age and benefits.

There are relatively few studies on the effect of non-contributory public pension on elderly employment in developing countries and the evidence is mixed. de Carvalho Filho (2008) investigated the effect of an increase in pension and a reduction in minimum age eligibility in rural occupations in Brazil and found that pension raised retirement by 38 percentage points. Juarez (2010), on the other hand, found that a pension program in Mexico did not change the labor market behavior of persons who received pension or were close to receiving it (near elderly); there was, on the other hand, a decline in the employment of non-elderly adults living in households with elderly members. Bloom, Canning, Fink, and Finlay (2007) studied 51 low and high income countries and found the employment effect of pension to be modest. They concluded that the introduction of a fully funded pension system would reduce old-age labor supply by around 5%. This variance in findings across countries is partly due to differences in institutional settings and programmatic details, but makes generalizations across countries difficult.

An important question is: who benefits from public pension programs? Researchers have variously examined this issue. One string of research pertains to how public pension affects private transfer from children and other family members. The general conclusion from this research is that a dollar in public transfers is associated with a 20–39 cents reduction in private transfers from children living away from home (Biddlecom, Hermalin, Ofstedal, Chang, & Chuang, 2001; Cox & Jakubson, 1995; Cox & Jimenez, 1992; Fan, 2010; Jensen, 2003; Maitra & Ray, 2003; Ward-Batts, 2000).[2] These studies, however, only capture how pension affects transfers from children (or other family members) to the elderly, but not how pension to the elderly in turn impacts the lives of other family members, including prime age adults and grandchildren. Ardington *et al.* (2009) studied the South African Pension Program and found that in response to public pension prime-age adults increased employment—but most of the increase occurred through labor migration.[3] Ardington *et al.* concluded that pension lowered credit and childcare constraints and allowed prime aged adults to migrate for work. In this sense, pension increased resources not just for the elderly but also for their families.[4] Duflo (2003) found the effect of pension to flow from grandmothers to granddaughters: pension received by women improved the weight and height of their granddaughters. Overall, these studies suggest that pension programs in developing countries have modest to large effects on elderly employment; these programs lower elderly poverty and benefit non-elderly family members.[5] This paper adds to the existing literature by investigating the effect of public pension for the poor elderly persons in India on their employment and expenditures.

3. INDIA'S OLD AGE PENSION SCHEME

Traditionally, elderly people in India have lived with their children or grandchildren. Such living arrangements are usually mutually beneficial with the elderly providing childcare and other forms of support in domestic work to their families and receiving emotional and economic support and old age care in return. Public pension, for a vast majority of the nation's population, had been modest or non-existent (Rajan, 2007). While workers in the formal sector, including those working for the state or federal governments, have certain forms of pension from their employers, only 7% of the working age population in the country works in the formal sector. The remaining 93% work in the informal sector with low wages and no social security.[6]

Historically, several state governments have provided a paltry pension benefit to the elderly and in 1995, the federal government added a modest monthly pension of Rs. 75 via the National Old-Age pension Scheme (NOAPS) to persons aged 65 or above with little or no regular income or financial support from family members or other sources (Ministry of Rural Development, 2008). The NOAPS imposed a ceiling on the number of beneficiaries with the objective of covering half the elderly poor population in each state (Alam, 2004; Planning Commission, 2008, chap. 4).

As part of a larger initiative to develop social protection for workers in the informal sector, in 2006, the federal government raised the federal pension amount to Rs. 200 per month and urged state governments to provide an additional matching pension of Rs. 200.[7] It also extended federal pension to all persons aged 65 or above in households with incomes below the federal poverty line, increasing the number of beneficiaries from 8 million in 2004–2005 to 14 million in 2007–2008.