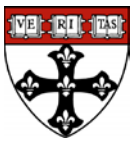


PROGRAM ON THE GLOBAL DEMOGRAPHY OF AGING

Working Paper Series

Economic security arrangements in the context of population ageing in India

David E. Bloom, Ajay Mahal, Larry Rosenberg, and Jaypee Sevilla

September 2010

PGDA Working Paper No. 60
http://www.hsph.harvard.edu/pgda/working.htm

 The Program on the Global Demography of Aging receives funding from the National Institute on Aging, Grant No. 1 P30 AG024409-06.

Economic security arrangements in the context of population ageing in India

David E. Bloom, Ajay Mahal, Larry Rosenberg, and Jaypee Sevilla[1]

Harvard School of Public Health, United States

Abstract The rapid ageing of India's population, in conjunction with migration out of rural areas and the continued concentration of the working population in the informal sector, has highlighted the need for better economic security arrangements for the elderly. Traditional family ties that have been key to ensuring a modicum of such security are beginning to fray, and increased longevity is making care of the elderly more expensive. As a result, the elderly are at increased risk of being poor or falling into poverty. In parallel with its efforts to address this issue, the Government of India and some of the Indian states have initiated an array of programmes for providing some level of access to health care or health insurance to the great majority of Indians who lack sufficient access. Formal-sector workers have greater social security than those in the informal sector, but they only represent a small share of the workforce. Women are particularly vulnerable to economic insecurity. India's experience offers some lessons for other countries. Although there is space for private initiatives in the social security arena, it is clear that most such efforts will need to be tax-financed. The role that private providers can play is substantial, even when most funding comes from public sources, but such

---

1. Address for correspondence for all authors: Department of Global Health and Population, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115 United States; Email: dbloom@hsph.harvard.edu; amahal@hsph.harvard.edu; larry_rosenberg@harvard.edu; jsevilla@gmail.com.

This is an early draft of a paper prepared for a special issue "Social security and the challenge of demographic change" of the *International Social Security Review* (Vol. 63, No.3-4, 2010). The definitive version is available at wileyonlinelibrary.com.

Support for David Bloom's work on this article was provided by the Program on the Global Demography of Aging at Harvard University, funded by Award Number P30AG024409 from the National Institute on Aging. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Aging or the National Institutes of Health.

The authors thank Mukul Asher, Suman Bery, Sonal Desai, Roddy McKinnon, and Kavita Sivaramakrishnan for their useful comments, and Elizabeth Cafiero and Anup Karan for their help on this article.

activity will face greater challenges as more individuals seek benefits. India has also shown that implementation can often be carried out well by states using central government funds, with a set of advantages and disadvantages that such decentralization brings. Finally, India's experience with implementation can offer guidance on issues such as targeting, the use of information technology in social security systems, and human resource management.

Keywords old age risk, old age benefit, medical care, social security administration, demographic aspect, India

Introduction

Population ageing is most often associated with European countries (especially Italy) and Japan. Less well-known are the ageing populations of Eastern Europe and the Russian Federation. Even more removed from common discussion is the fact that India, the People's Republic of China, and many other developing countries are also undergoing rapid population ageing. The transformation of India's age structure is coming soon, and it will be dramatic. As we discuss below, the much greater share of the elderly in India's population will be coming at a time when new trends may upend the country's longstanding reliance on strong family ties to ensure the care and well-being of the elderly.

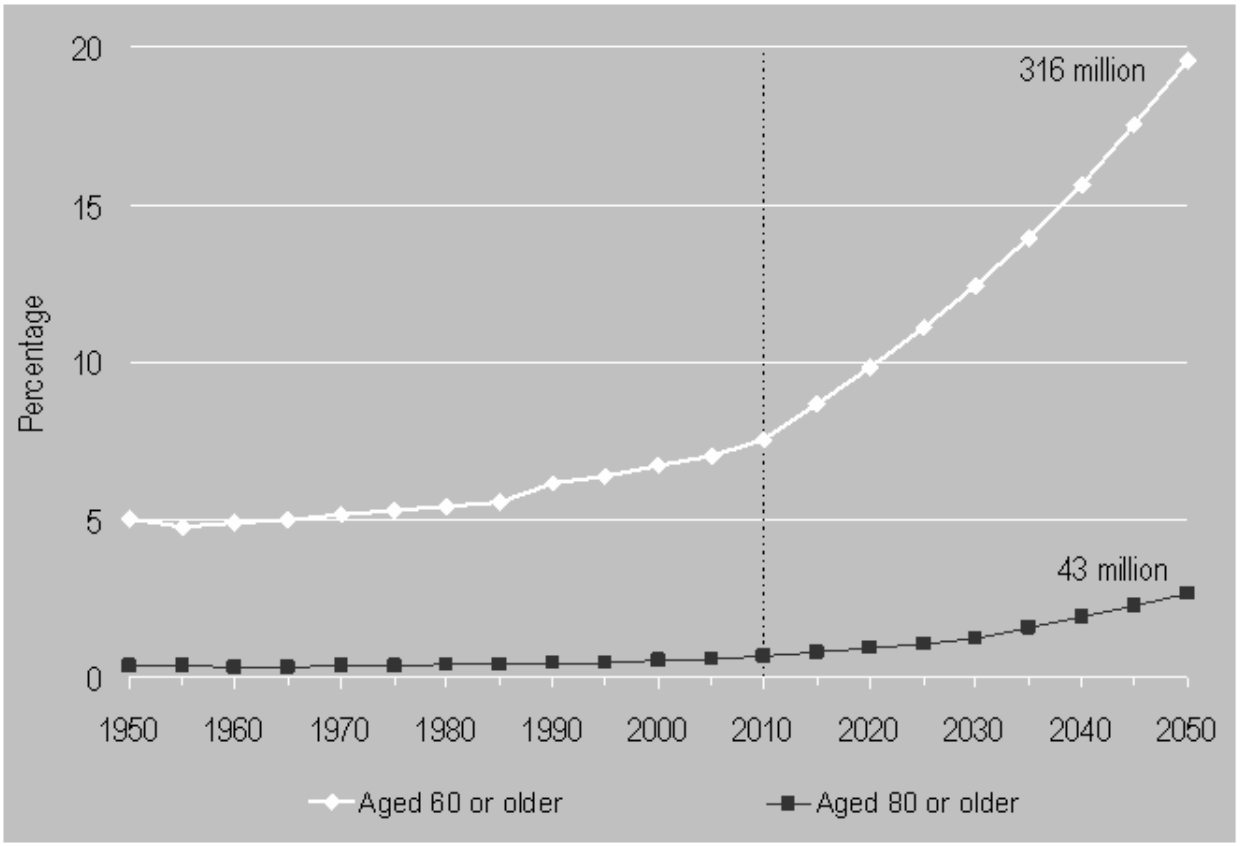
India's elderly potentially face significant economic insecurity. And in part because of the uncertainty imposed by the risk of major health expenditures, India's population as a whole also has reason to worry about their economic fortunes. With the great majority of Indians working in the informal sector, government social protection programmes most often do not reach those most in need. Women face specific disadvantages in ensuring their economic security, as do migrants between Indian states.

A discussion of the potential solutions to the problem of economic insecurity in India may best begin with a brief look at India's ageing population.

India is getting older

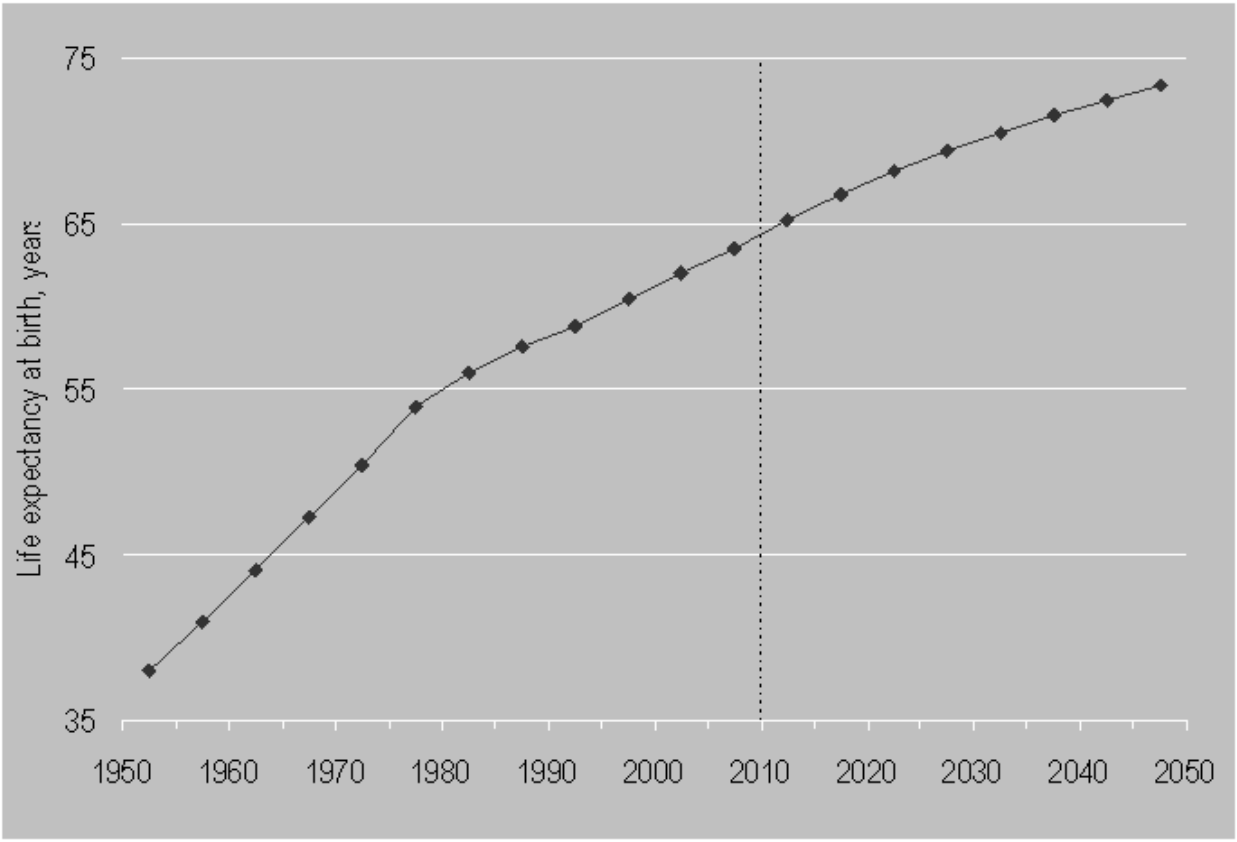
The share of India's population aged 60 or older has risen gradually from 5 per cent in 1950 to 7.5 per cent in 2010. That share is projected to climb to 20 per cent by 2050, representing more than 300 million people (see Figure 1).

Figure 1. *India's elderly population is growing rapidly*



Factors underlying the ageing of India's population include a falling fertility rate and increasing longevity. Life expectancy at birth rose from 38 years in 1950 to 64 years in 2010 (see Figure 2). While this is not nearly as high as the average in developed countries (78 years), it is similar to the average for the developing world (66 years) and is projected to rise another decade by the middle of the century.

Figure 2. *Life expectancy in India is rising at a good pace*



Trends affecting the economic security of India's elderly

As India's population ages, concerns about the economic security of the elderly naturally come to the fore. Traditionally, families have been the core source of economic support for people as they age, but new developments are calling into question the strength of such support and its role in the future.

First, for several reasons, family ties are beginning to fray. Internal migration of working-age people has led to some workers living far from their parents. The fragmentation of land has led to fewer children living with their parents, thus undermining the power that co-residence traditionally conveyed to the elderly. More broadly, there has been a diminished tendency to live in multigenerational family units. Urbanization, among other factors, has led to delayed and

reduced childbearing, meaning that intergenerational spacing has increased.[2] Compounding this set of changes are changing social expectations regarding intra-familial obligations. Another possible change could take place, although it has not yet: with an increased share of Indians living in cities, women might enter the labour market in greater numbers, as they find greater opportunities for paid employment. Working outside the home would decrease their ability to care for ageing parents (although it might increase their capacity to provide their parents with financial assistance). So far, however, the female labour force participation rate has not increased in India (or in Asia as a whole) (World Bank, 2009).

Second, increased longevity has made taking care of the elderly more expensive. Indians, particularly those living in cities, now typically have a longer non-working period at the end of life than was true in the past. Personal savings help in this situation, but they are not usually sufficient; other sources of income, as we discuss below, are also often inadequate.

These factors and trends combine to increase the risk that non-poor elderly will fall into poverty.

In the remainder of this article we describe the nature of the financial insecurity that India's elderly face, emphasizing that old-age outcomes result from income and expenditure shocks and economic opportunities throughout people's lives. We assess the major government initiatives that address economic security for Indians at different stages of the lifecycle. Finally, we highlight the potential lessons that India's experience with these programmes holds for other developing countries that are contemplating similar initiatives.

The nature of insecurity

In the absence of support from the government and external organizations, income protection in old age is a function of several factors. First, it depends on how long an individual lives in retirement. Second, it depends on earnings during working years. Provided earnings are sufficient to allow for savings when working, and provided suitable avenues to invest such savings exist, individuals may be able to ensure adequate levels of post-retirement incomes. Third, financial support from the immediate and extended family, particularly children, can be an

2. Some changes are having the opposite effect. For example, in urban areas in particular, high housing prices, along with the informal nature of some real estate transactions, have ensured that the older generation continues to own the family home – resulting in the younger generation still living with their parents and being beholden to them.

effective substitute for inadequate personal resources of the elderly. Some of this support may also take the form of bequests of financial and physical assets from relatives, especially parents. Finally, the elderly could continue to work beyond their planned retirement age.

The simple lifecycle story outlined above is complicated by four factors. The first is the unpredictability about the length of life post-retirement. Even if individuals save enough to ensure consumption smoothing in an expected sense, their actual consumption may fall short of requirements if they live too long; or they may end up with unconsumed resources if they die too soon. The second has to do with uncertainty about earnings and income, including the likelihood of individuals' being unemployed or underemployed during their working years and volatility in returns to savings. Income uncertainty (but not inadequacy) may cause risk-averse individuals to save too much relative to efficient levels. Risk aversion may also lead individuals to work in occupations and investments that yield lower (if safer) returns (Morduch, 1995). Third, irrespective of age, a serious illness or death in the immediate (or even the extended) household to which an individual belongs has the potential of seriously undermining the long-term economic prospects for that individual. This may involve not only lower savings when health expenses are paid for out-of-pocket, but additional consequences such as children being pulled out of school, caregivers taking time away from work, or lower nutritional intake, resulting in an adverse impact on their long-term economic circumstances. In the case of the elderly who fall ill and finance their own care, they may have fewer resources left over to support the remaining years of their life. Finally, individuals may have self-control problems that prevent them from saving sufficiently (Barr and Diamond, 2009).

Applying the lifecycle framework to India

The expected number of years lived in India by individuals aged 60 or older has increased dramatically in the last few decades. In 1970, the average Indian at birth could expect to live to about 50 years, and individuals who reached age 60 could only expect to live an additional 9 years (Visaria, 1999). However, recent estimates from the Sample Registration System (SRS) suggest that, in 2010, an average Indian at birth can expect to live for about 64 years, and life expectancy at age 60 is closer to 20 years (Registrar General of India, 2009). With those aged 60 or older representing nearly 8 per cent of the total population, a figure expected to increase

sharply in future years, a significant portion of the Indian population will require income support for an average of 20 years per person.

The number of years lived need not be a challenge from the standpoint of income protection, if earnings levels are sufficient, if the duration of working life can be extended, or if there are mechanisms by which any savings accrued during an individual's productive working years can be effectively invested to yield adequate income following exit from the workforce. However, the vast majority of India's elderly face challenges on all of these fronts. More than 90 per cent of India's workforce is employed in the informal sector, a proportion that has remained more or less unchanged over the last two decades even as India has experienced rapid economic growth (Unni, 2002); and nearly one-fifth of the workers in the Indian informal sector, the "working poor", have earnings that are insufficient to move their households above the poverty line. Large numbers of people have earnings that lie just above the poverty line, with little room for saving for retirement (Sastry, 2007). In addition, some individuals are unable to work for reasons of health and disability and therefore end up living in poverty. Even if adequate savings were available, opportunities for investment appear to be limited. Consider the reach of formal financial institutions in rural areas, where 70 per cent of Indians currently live (down from 80 per cent in 1970). Recent survey data suggest that despite substantial improvements in access over time, as many as 60 per cent of rural households do not have bank accounts and an even greater proportion cannot access credit from banks (Basu and Srivastava, 2005). In addition, among savers in India who do have such access, there is a tendency to rely on commercial bank deposits that yield low but stable returns (less than 10 per cent of households have any savings invested in capital markets). This conservative savings behaviour is possibly a reaction to the volatility in Indian stock markets (Asuncion-Mund, 2007).

Support from family members remains a linchpin of old-age income security in India. More than 75 per cent of all Indian elderly live with their children, and the proportion is even higher (in excess of 90 per cent) if we limit our attention to the elderly with children who are alive. A high proportion of this group also relies on their children for financial support (Pal, 2004). However, long-term economic and demographic developments are likely to undermine this support system. India's total fertility declined from 5.3 in 1970 to 2.7 in 2008 and currently all states in Southern India have fertility rates at or below replacement levels. With further decreases in fertility forecast for the future, the resulting increase in the elderly dependency ratio (the ratio of the

elderly to the working-age population) suggests that future working-age adults will find it difficult to financially support their older family members (Ministry of Health and Family Welfare, 2009; ESA, 2009). These changes will likely go hand in hand with the migration of working-age populations, usually from rural to urban areas in search of better economic opportunities, often leaving elderly dependants behind. Indeed, there is some evidence that the proportion of the elderly is greater in India's rural population than in the urban population (Visaria, 1999; Deshingkar and Akter, 2009). This need not mean an immediate and corresponding decline in financial support from children, but it does indicate a weakening of the ties that underpin such support.

Risks relating to the number of years lived following retirement and earnings carry special resonance in the Indian context. Support from the family is an important way to address these risks, especially if a bequest is likely to be provided, or other forms of mutual exchanges are involved. With declining family-based support systems, a key mechanism to address uncertain lifetimes is likely to be an annuity. Unfortunately, the Indian annuity market is still quite underdeveloped. This is not surprising since, until 1999, the Indian insurance market was in the hands of two government monopolies – the General Insurance Corporation and the Life Insurance Corporation – and did not offer much by way of innovative or consumer-oriented products. Although the variety of insurance products and the number of firms offering such products has surged in recent years with the elimination of the public-sector insurance monopoly, the likelihood of adverse selection is likely to limit the expansion of private annuity markets. Moving to income risks, there is no formal unemployment insurance in India, although there are insurance mechanisms for the agricultural sector, such as agricultural price supports. Publicly-provided crop insurance is also available although it faces high administrative costs and limited demand given that the vast majority of Indian cultivable land holdings are small (Venkatesh, 2008). These offer little comfort, however, to low-skilled casual workers (including agricultural labourers and marginal farmers) in the informal sector who have neither stable earnings opportunities, nor sufficient remuneration while working (Sastry, 2007).

Increased exposure to financial risks from ill health will continue to pose a serious risk to the immediate and future economic well-being of Indian households, whether or not they include the elderly, given that much of the health spending in India is out-of-pocket (Government of India, 2009; Krishna, 2007). Households with the elderly are, however, particularly at risk, both

because of their greater likelihood of becoming ill and because they are likely to require more intensive care. Data from a recent household survey show that annual per capita out-of-pocket health spending in India was almost four times as high among the elderly (INR 2,890) as among members of working-age groups (INR 770) (authors' calculations, based on National Sample Survey data from the 60th round). Available evidence also indicates that financial risks from ill health have increased over the last two decades, particularly for poorer households. Table 1 shows that between 1987 and 1996, out-of-pocket spending for outpatient visits and hospitalization stays increased at a slower rate than total consumption spending per capita (our proxy for income) for the poorer groups in the population. However, the situation changed dramatically between 1996 and 2004, with out-of-pocket expenses for hospitalization stays increasing sharply among the poorer groups to almost equal (or exceed) total spending per capita in 2004.

Table 1. *Trends in out-of-pocket expenditure on health services in India, by expenditure quintile, in INR (Indian rupees)*

Year	Urban			Rural		
	Poorest 20%	Middle 20%	Richest 20%	Poorest 20%	Middle 20%	Richest 20%
Per outpatient visit						
1987	58	80	110	60	76	96
1996	126	173	252	121	161	227
2004	231	288	482	213	243	338
Per hospital stay						
1987	801	933	1,781	653	784	1,059
1996	864	2,031	8,182	1,052	1,506	5,305
2004	4,705	7,717	16,910	4,071	5,034	8,375
Total (health+non-health) expenditure per capita						
1987	1,000	1,796	4,532	760	1,211	1,497
1996	2,848	5,293	12,624	2,093	3,424	6,744
2004	4,967	9,293	24,676	2,997	5,091	10,926

Source: Authors' calculations, based on National Sample Survey data, for 1987, 1996 and 2004.

Much of this increase in out-of-pocket health spending can be attributed to a mixture of poor quality public services, a contraction in government spending on public health services (as a proportion of GDP) in the 1990s, and limited access to other forms of health insurance, whether mandated or voluntary (Yip and Mahal, 2008). This has forced individuals, most of whom are uninsured in India, to rely on health services in the private sector. There is also the likelihood of income losses owing to premature death and/or days missed at work, although little evidence exists on this topic in India.

Old-age income security for Indian women

Old-age income security for women is of particular concern in India, first of all, because women tend to live longer than men. Currently, Indian women aged 60 can expect to live two more years than their male counterparts. A more crucial factor, perhaps, is that women in India have lower labour force participation rates and tend to work for fewer years than men (Sastry, 2007). In India, as elsewhere, there is also evidence that women tend to rely to a greater degree on employment in the informal sector and lack access to much of the protection available to formal-sector workers, including health insurance coverage, sickness leave, and mandatory old-age savings (Sastry, 2007; Unni, 2002). In sum, women are less well-placed than Indian men to rely on earnings during their working years to provide for old-age income security.

To the extent that inherited assets can alleviate income insecurity, it is important to note that women are also at a disadvantage in terms of ownership of family property through inheritance. In India, rights to ancestral property are defined as part of religious laws (separately for Hindus, Muslims, Christians and other groups) that have traditionally discriminated against women. Until recently, rights to agricultural land were particularly restricted with obvious consequences for the economic well-being of women in rural areas (Agarwal, 1995; Pandey, 2005). Recently, however, an amendment to property laws that apply to Hindus has led to girl children being granted equal rights in ancestral property, including agricultural land. With social norms still strongly set in favour of male inheritance, it remains to be seen how this will affect women's control of (as against ownership) of land. In any event, the law does not affect the situation for women belonging to non-Hindu groups, who make up about 20 per cent of the population. Survey data show that among people older than 60 years, the proportion of males reporting ownership of financial or real assets was nearly 80 per cent higher than among women, although there is some regional variation in favour of women in southern India (Pal, 2004).

Leaving assets aside, older women in India have less access to other forms of economic support from their families than older men. While the elderly live primarily with their children in India, Pal (2004) using survey data for India found that relative to elder widowers who tended to live with their children, widows lived alone to a much greater extent. With little access to assets and earnings, it is no surprise that older women, particularly widows, face dire economic circumstances in India (Drèze and Srinivasan, 1997; Chen, 1998).

Old-age income security for formal-sector workers in India

Many of the arguments outlined above with regard to income security for the Indian elderly apply directly to individuals and households that depend on the informal sector for their earnings. The formal-sector workers – primarily employees in public and private enterprises and governments at the local, state and central levels – enjoy not only higher earnings on average, but also benefit from more reliable income, health, disability and sickness benefits, and mechanisms intended to provide for old-age financial support (Shah, 2006; Cichon and Hagemejer, 2007; Asher, 2010). Currently some 40-45 million individuals, or about 10 per cent of the working population, mandatorily contribute to pension and retirement savings schemes for formal-sector workers. About one-third of these formal-sector workers contribute into one (or both) of two schemes – the Employees Provident Fund (EPF) and the Employees Pension Scheme (EPS) – administered by the Employees' Provident Fund Organization (EPFO). The EPF provides a lump-sum payment at retirement (usually age 60) and the EPS is a defined benefit scheme that pays a pension conditional on earnings at the time of retirement and years of service. The scheme for government employees is a mix of a non-contributory (tax-financed) defined benefits plan (for employees appointed before January 2004) and a defined contribution plan (National Pension Scheme – NPS) mandated for all central government employees appointed on or after January 2004, with matching government contributions. Under the NPS, at the time of maturity a certain minimum of the cumulative amount in an individual's account is used to purchase an annuity (the rest being paid as a lump sum). Traditionally, state government and public-sector employees were also eligible to participate in the NPS. As of 2009, however, the Indian government has opened up the scheme (on a voluntary basis) to all Indian citizens, albeit without any matching contributions (Asher, 2010). Both the EPFO and the administrators of the NPS have relied on competitive bidding for fund management in recent years, resulting in yields well in excess of 10 per cent per year and extremely low management fees.

These recent developments mark an important step in ensuring the sustainability of schemes for old-age pensions among formal-sector workers. However, concerns remain with respect to the early withdrawal of funds from provident funds in the case of the EPF. Moreover, the defined benefit scheme under the EPS leaves the EPFO responsible for substantial payouts without adjustments to factors such as contribution rates, age of retirement, and replacement rates (Asher 2009). These schemes also do not address other key elements of concern highlighted in the

lifecycle framework – namely insurance against financial risks from ill health, disability, unemployment, and so forth.

The Employees' State Insurance Corporation (ESIC) provides many of these benefits (including health coverage) for employees in private enterprises belonging to the formal sector, including retirees and dependants, based on contributions. There are currently some 50 million "insured" persons on the rolls of the ESIC. The state and central governments and public enterprises have separate schemes to cover their employees against the financial risk of ill health and financial losses due to sickness and disability. These are usually non-contributory (tax-financed) and the benefits quite generous, including referrals to high-end facilities in the private sector. The major challenge in these schemes is the financial burden that is likely to fall upon the various governments and ESIC as the costs of health care continue to rise.

Summing up

When looked at from a lifecycle perspective, the challenge of ensuring old-age income security in India requires simultaneously addressing the need for adequate incomes while working, developing appropriate vehicles for translating savings into productive investments, and mechanisms to address uncertainty about the length of life and health risks. In the Indian context, these challenges are particularly serious for workers in the informal sector, who account for nearly 90 per cent of India's labour force, especially those workers who are less skilled and have less access to assets. Women are at special risk in this group, given their disproportionate presence in the informal sector, shorter work spans, longer life expectancies and limited access to other assets. In contrast, recent pension reforms and existing medical and other insurance programmes for India's formal-sector workers ensure that they have a considerably better financial outlook for their old age. Even here though, there is a risk of insolvency in some of the existing defined benefit plans, and increased financial stress arising from health care spending, driven both by a longer-lived population and technological changes (Mahal et al., 2006; Shah, 2006). All of these risks are underpinned by a family-based support system that is likely to become less effective in the future.

India's response to the income insecurity of the elderly: Overview and assessment

The preceding analysis suggests the need for a holistic approach to addressing old-age financial outcomes. In many respects, this is characteristic of the World Bank's multi-pillar framework for

pension systems and reform (Holzmann and Hinz, 2005). The five pillars specifically refer to (a) an unfunded social pension (the "zero" pillar) supported from budget funds; (b) a mandated contribution-based defined-benefit (DB) pension with benefits linked to earnings, possibly financed on a PAYG basis (first pillar); (c) a mandated defined contribution plan (individual accounts) (second pillar); (d) a voluntary contribution-based plan that could be employer sponsored, individual accounts, DB or defined contribution (DC) (third pillar) and (e) informal support systems (fourth pillar). These five pillars are an expansion of the original three-pillar framework that was introduced in 1994, a model that was particularly suited for the formal sector and did not take into account the needs of the poorest. The five-pillar framework was thus created to address the needs of both formal and informal sector workers, as well as the poor, through different types of pension plans.

The multi-pillar model is attractive in that it maps into specific policy needs. The social pension pillar (essentially a fixed amount per recipient) serves as a mechanism to protect against old-age poverty among the chronically poor and marginally non-poor individuals in the informal sector who may be vulnerable to old-age income insecurity. In contrast, the first and second pillars are directly addressed to people in the formal sector for whom the major concerns relate to consumption smoothing and protection against longevity risk. The second pillar also serves as a mechanism to address concerns about the sustainability of first-pillar DB plans, while ensuring suitably high replacement rates and addressing concerns about myopia among savers. The third pillar (which presumably also includes micro-pensions – see below) is intended to attract at least some of the informal-sector workers along with giving some leeway for individual choice among formal-sector members of the first and second pillars. Parametric changes in the first and second pillars (e.g. changes in the retirement age) can contribute to addressing the income security concerns of retired women. The fourth pillar will help take advantage of the existing norms that favour family-based support. Moreover, the multi-pillar framework enables risk diversification as each of the pillars is subject to risks that are not perfectly correlated. The existence of well-functioning capital markets is taken as a given, however.

The World Bank’s multi-pillar framework reflects the needs of low-income developing countries in a way that their original three-pillar framework of the 1990s did not (Casey and McKinnon,

2009).[3] The multi-pillar framework is incomplete, however, in that it does not explicitly consider other elements of social protection that have implications for old-age financial security, specifically mechanisms that address income risk while working and financial risks from ill health. It is from this extended perspective that we assess India's recent efforts at addressing financial security for its elderly, particularly those who derive their earnings from the informal sector.

Programmes intended specifically for enhancing elderly income and support

In India, mechanisms to support the elderly include, first, social assistance for the elderly, an effort in which both the central and state governments have been engaged. The central government launched the National Old Age Pension Scheme in 1995 (renamed recently as the Indira Gandhi Old Age Pension Scheme) as a part of its national social assistance programme. This programme aims to provide a pension of INR 200 monthly (USD 4 approx.) for elders above the age of 65 who belong to poor households. This scheme currently covers roughly 16 million elderly. Poor elderly women are also eligible to receive subsidized food-grains under an alternative scheme, also financed by the central government. There are, in addition, pension schemes for "freedom fighters" and disabled individuals, which end up helping the elderly even though they are not age-restricted. A major challenge with these schemes is weak targeting of the poor, which is usually based on some combination of a survey-based definition of poverty and community identification of the poor. Significant fraud has been noted in cases of the freedom fighter scheme (Rajan, 2007).

Another targeting issue identified in assessments of the Indira Gandhi Old Age Pension Scheme is the difficulty of determining the age of a person, particularly in rural areas. This problem is

3. A much broader World Bank conceptual approach to meeting the social protection needs of individuals in low-income developing countries is the Social Risk Management (SRM) framework (Holzmann and Jørgensen, 2000), which has been defined as having the dual roles of protecting basic livelihood and promoting risk taking. The concept recognizes the different capacities and needs of individuals to manage lifecycle risk and incorporates three strategies for dealing with risk (prevention, mitigation and coping) and three levels of risk management (informal, market-based, public). The SRM framework has been criticized for placing too much emphasis on the role of "coping", which is not, in fact, a tenet of risk management but a measure of its absence (McKinnon, 2002).

particularly acute for Hindu girl children who traditionally did not inherit property in India so that the incentive for recording their birth date officially is correspondingly lower.

In recent years, micro-pension schemes for workers in the unorganized sector have emerged. Two prominent examples of these voluntary schemes that rely on small (but periodic) contributions into individual accounts are the one for members of the Self Employed Women's Association (SEWA), in collaboration with the Unit Trust of India, and one for unorganized-sector workers in Rajasthan (the *Vishwakarma* scheme) that also involves a co-contribution by the state government (Shanker and Asher, 2009). The contributions in the SEWA scheme are managed by a mutual fund organization, whereas, in the latter case, the government of Rajasthan provides a fixed rate of return. Recently, the government of Andhra Pradesh introduced the *Abhaya Hastham* scheme directed towards poor women belonging to self-help groups. This scheme involves both the government and the individual contributing INR 30 per month each into an individual account, with accumulated funds converted into a pension upon reaching age 60 (Government of Andhra Pradesh, 2009). The government of Madhya Pradesh is introducing a similar scheme. Micro-pension schemes, with government co-contributions, are a relatively new phenomenon in India, and offer an interesting template for effective targeting of pensions to the poor given the extensive publicity and the involvement of NGOs and self-help groups. They also offer a model for public and private sector cooperation – with micro-pension products for both Andhra Pradesh and Madhya Pradesh being developed by a consortium of an asset management company, SEWA Bank, and the Invest India Economic Foundation (Prasad, 2009).

The recent changes to the National Pension Scheme (intended initially for government employees) that allow for any Indian to contribute, opens up another avenue for savings for old age in the informal sector, although the threshold for minimum contributions is significantly higher than in existing micro-pension schemes. Other contributory schemes, on a limited scale and of an older vintage, also exist for specific worker groups in India, such as beedi workers and workers in the fishing industry (Rajan, 2007). The main difficulty with these contributory schemes, particularly voluntary schemes, is the need not only for mechanisms that enable the collection of small contributions on a frequent basis, but also the ability to track individual accounts and identify individuals, particularly in the informal sector where jobs are often of short duration and migration across regions common. Some of these problems are likely to be overcome with the development of a unique identification card/number for each Indian, a process

that is currently underway (Yadav, 2010). The use of smart cards with biometric information and mobile banking services with extensive village outreach are likely to lower the cost of such interactions considerably. Some Indian states already have programmes that transfer social assistance benefits to the poor using this mechanism (Mohan, 2008).

For the formal sector, as discussed earlier, recent developments have included reforms to the existing pension schemes for government employees, with the launch of the National Pension Scheme (NPS). For central government employees hired on or after January 2004, mandated employee contributions of 10 per cent are matched with a 10 per cent government contribution, and the funds managed by professional fund managers. Individual account holders choose to invest their funds across different types of assets. No withdrawal is allowed until retirement and some minimum portion of the accumulated funds (at retirement) must be invested in an annuity. In addition, there is a voluntary tier, where employees (and other Indians) can choose to invest on their own. The scheme has also experienced rapid uptake by state governments for their employees. Innovative features of the scheme include professional management of funds, with the manager being chosen through a competitive process. This has resulted in administrative costs that are less than 0.1 per cent of funds managed, significantly less than the market average of 2-3 per cent. Another useful feature of this scheme is a "default" option, should an account holder fail to allocate their assets. This helps to address questions relating to individuals' ability to make informed choices on asset allocation of the contributed funds (Barr and Diamond, 2009). Not included under the coverage of the NPS are personnel of the defence forces and employees in formal-sector firms. Defence force personnel are covered by a separate defined benefit scheme and non-government employees in the formal sector are covered by the EPF and the EPS, referred to earlier. Again, recordkeeping has been a major difficulty for the EPFO, with paper records being the norm. According to one recent estimate, the actual number of active members under the administration of EPFO is about 40 per cent of the existing records, which are usually not updated to reflect deaths or movements across jobs (Shah, 2006). A more fundamental problem with EPFO is that firms that offer returns to contributions that exceed those offered by EPFO can opt out of the system, thus limiting the risk pool. A similar issue hampers the social health insurance programme for employees of formal-sector firms (see below).

In addition to programmes focused on pensions and provident fund payouts, there have been recent efforts to lend support to family-based support for the elderly. There is, in fact, a long

history in India of state legislation being used as a device to induce children to take care of their elderly parents, including the Hindu Adoption and Maintenance Act of 1956 and the Code of Criminal Procedure (Rajan, 2007). However, the effectiveness of such programmes has been questionable, as reflected in several reports on the abandonment of the elderly by their adult children (Pandey, 2007). In an effort to remedy these concerns, in 2007, the Indian parliament enacted the Maintenance and Welfare of Parents and Senior Citizens Act that obligates children (and in some cases relatives) of needy older individuals to provide financial support to the latter, failing which the former could even be jailed (Government of India, 2007). To seek to avoid the long delays characteristic of Indian courts, "Maintenance Tribunals" have been set up by individual state governments to implement the Act outside the purview of any civil court in India. Given its recent enactment, little is known about its effectiveness, although there have been some reports of delays in its implementation at the state level (Sood, 2010).

Programmes intended to enhance incomes for informal-sector workers

India has experienced rapid economic growth in the last two decades, the result of a mix of reform-minded policies, a demographic transition that has led to rapid growth in its working-age population, and greater global economic integration. However, a continued concentration of the workforce in the informal sector has left large numbers of individuals without the employment protection available to formal-sector employees. As seen above, a significant number of workers in the informal sector do not earn enough to lift, and then keep, their households out of poverty.

One major area of government activity in the effort to promote productive employment in the informal sector has been the provision of subsidized micro-credit, particularly in rural areas. This is reflected in Reserve Bank of India regulations that tie commercial banks to allocating at least 40 per cent of their business to "priority areas" at low rates of interest, the growth of state-owned regional rural banks lending at subsidized interest rates, and public-sector institutions such as the Small Industries Development Bank, the *Rashtriya Mahila Kosh* and the National Bank for Agriculture and Rural Development (NABARD) that refinance lending activity in rural areas and the small-scale and micro-sector (Planning Commission, 2007). NABARD also functions as a regulatory authority for microfinance institutions in rural areas. Rapid economic growth has fuelled a corresponding growth in banking business and in micro-credit, and by some estimates there may be as many as 20 million micro-credit borrowers (Miller, 2006). Plagued by years of

losses and low uptake, there has been an increasing tendency among commercial and government-owned banks to work with self-help groups (SHGs) and non-governmental organizations (NGOs) in an effort to address problems of moral hazard and adverse selection among borrowers. There is some evidence that loan repayment rates are considerably greater when banks partner with SHGs or NGOs (Planning Commission, 2007). Overall though, informal lending institutions (e.g. money lenders) continue to account for a significant portion of loans, owing to their extensive outreach and ability to lend for consumption purposes (Basu and Srivastava, 2005).

Alongside efforts to expand credit, the government has sought to provide subsidized insurance against certain risks. For instance, crop insurance is provided at heavily subsidized rates, most recently under the auspices of NABARD, but the experience has not been particularly promising: insurance uptake has been low, and claims ratios (ratio of claim payouts to premium collections) have been as high as 500 per cent, suggesting that the premiums have not been grounded in sound actuarial calculations, a problem that also exists in the health insurance sector. In addition, given the high transactions costs of operating crop insurance for small farmers, this has not been an attractive proposition for the insurer. There has been some discussion to move to "weather insurance" as a mechanism to address the difficulties of administering crop insurance – indeed, some private insurers are moving in this direction (Venkatesh, 2008).

Perhaps the most significant recent effort to enhance incomes in the informal sector is the Mahatma Gandhi National Rural Employment Guarantee Scheme (NREGS) launched in 2006, which guarantees employment of 100 days annually to any rural household that has individuals ready and willing to work in activities that involve physical labour; the programme provides a wage of INR 100 per day. The scheme builds on previous programmes, including the Maharashtra Employment Guarantee Scheme (launched in the 1970s) and the National Food for Work Programme. The programme has grown rapidly since its launch in 2006-2007, with the number of person-days of employment rising from 0.9 billion in 2006-2007 to 2.9 billion in 2009-2010. A number of concerns have been raised about poor targeting, corruption and delays in providing statutory employment, but existing evaluations suggest that the programme has benefited the rural poor, particularly women, who have been a significant proportion of the beneficiaries under the programme (Dey, 2010; Drèze and Khera, 2009; Jha et al., 2009). Innovative aspects of the programme include self-targeting (any rural household can apply for

employment under the programme), transparency (detailed records are available online for every works programme), and considerable oversight by village governments (*panchayats*) and NGOs.

There are other ways in which government interventions have sought to enhance incomes among members of working-age groups. Recent changes in Hindu laws of inheritance may well increase access for working-age women to productive assets, including agricultural "income support" for workers and survivors: land. There is direct financial support in the form of a lump-sum grant from the national government for poor families that lose their breadwinner (National Family Benefit Scheme), and starting in 2009, a new scheme was introduced that provides INR 200 per month to widows aged 40-64 living in below-poverty line households. Other forms of support have included subsidies for housing under the so-called *Indira Awas Yojana* to poor and low-caste households. These appear to have been well-targeted, but are characterized by high levels of corruption and delays in the transfer of funds to beneficiaries (Srivastava, 2004). Government benefits are also available through food subsidies provided by the government, although once again, India's subsidized public distribution system has faced considerable criticism on account of high leakage to non-poor households, and the low quality and limited variety of food items distributed (Srivastava, 2004). Government subsidies for school education in rural areas (such as under the *Sarva Shiksha Abhiyan*) can also be considered as activities intended to enhance earning opportunities for households in rural areas.

Programmes protecting against the financial risks of ill health

It is estimated that no more than 15 per cent of India's population has access to formal health insurance, be it in the form of social health insurance (the so-called Employees' State Insurance Scheme – ESIS) through contributions paid by the employee and the employer, private health insurance, or informal-sector insurance schemes. Some employers, such as the armed forces and Indian Railways, offer their own subsidized health services to their employees. In principle, Indians (including those lacking insurance) can access subsidized health services provided by the public sector. However, by almost all accounts, public-sector health facilities in India offer care of poor quality (as reflected in long waiting times, high rates of absenteeism, particularly in primary care facilities in rural areas, and the unavailability of medicines). The poor quality of health services is the result of a mix of factors, including (until recently), declining public-sector health spending, low salaries, and a variety of organizational characteristics that limited

transparency and accountability (Yip and Mahal, 2008). The social insurance scheme (ESIS) in India has also come under severe criticism for poor-quality health facilities.

The large numbers of the poor and individuals working in the informal and the agricultural sectors in India has motivated a number of innovative schemes to address the health-financing related concerns of these groups. Given that the provision of health services in India is primarily a provincial responsibility, one way in which this has occurred is in the form of provincial government-led initiatives. At the same time, the large amount of financial resources controlled by India's central government implies that it is often the driver of major initiatives.

Thus, in 2005, the government of India embarked on the "National Rural Health Mission" (NRHM) aimed at trebling the public sector's contribution to health (as a proportion of GDP) by 2012 via expenditures on personnel, health facilities, health insurance programmes and so forth, in collaborations with provincial governments (Gill, 2009; Yip and Mahal, 2008). With funding provided by the NRHM, state governments have encouraged women to give birth in institutional settings, irrespective of whether these are in the private or public sector. Apart from organizational changes, the national government has sought to directly increase the number of health personnel and other resources available in rural areas under its NRHM through increased financing, and hiring from within villages where the services are to be delivered as a way to address absenteeism. Although a major goal of the NRHM is to enhance maternal and child health, its goal of improving rural health service delivery, including in secondary care facilities, ought to protect individuals against the financial risks of ill health. This enormous exercise – there are 565,000 villages in India – is still ongoing, although the major challenge appears to be the adequacy of training imparted to these personnel. A recent evaluation of the scheme by the Planning Commission (Gill, 2009) suggests considerable variation in performance across states, with the poor states lagging behind in the utilization of funds and service delivery quality.

Change in government regulations allowing for entry of private insurers has been another means by which the government has sought to promote health insurance coverage in the country. As part of the regulatory framework, introduced in 1999, permitting private firms to offer insurance products in the Indian market, all such firms were required to issue a certain proportion of their policies in the rural sector. This strategy has not proved particularly effective. According to the most recent estimates of the Insurance Regulatory and Development Authority of India (IRDA),

private health insurance coverage does not exceed one per cent of the Indian population. In an effort to expand their reach into rural/informal-sector groups, some insurance companies have brought together representatives of large groups of informal-sector workers to provide insurance coverage for hospitalization expenses to group members, such as SEWA. This mechanism of promoting insurance has the advantage of addressing problems of adverse selection that might otherwise hamper the viability of the insurance pool. These efforts have been confined, however, to unstable relationships with a few large organizations. Moreover, the coverage available under the health insurance packages provided in these arrangements is limited, owing to the small amounts that individuals members can pay, and hardly adequate to be considered as catastrophic insurance.

In some cases, insurance coverage to individuals in the informal sector has been directly provided by organizations of which they are members. A particularly large scheme that covers more than one million individuals is the Yeshasvini Cooperative Farmers Health scheme in the Indian province of Karnataka (Radermacher et al., 2005). The scheme insures members of farmers' cooperatives, covering them against the risk of expensive medical surgery. The scheme relies on both contributions from members of cooperatives as well as subsidies from the government. The funds collected in this manner are managed by a third party administrator responsible for paying out claims, maintaining records, approving claims and so forth. The scheme has been able to attract several good-quality private hospitals to provide the necessary surgical interventions covered by the insurance package as "network" hospitals. The organization has faced difficulties with ensuring the re-enrolment of members. It is also apparent that such schemes (along with private insurance) currently address the needs of only a small portion of informal-sector employees and rural households in India.

Recently, a number of tax-financed insurance schemes have emerged in several Indian states. The best known of these is the *Rajiv Arogyasri* scheme in the state of Andhra Pradesh. Begun initially as a pilot project in 2007, the scheme has been scaled up to all districts in the state, encompassing individuals living below the poverty line, which has been liberally defined to include some 64 million people (out of a total population of roughly 80 million) in the state. The scheme is managed as an autonomous entity (under the overall supervision of the state government) and is fully tax-financed. There is a network of over 200 approved, high-quality public and private hospitals to which enrolled individuals can access, following referral by a

primary health centre, their first contact point. Owing to its large purchaser status, the state government has negotiated favourable rates for a large range of inpatient and surgical interventions with hospitals. Network hospitals are also expected to undertake routine health check ups and health promotion visits and initiatives in rural areas. An ambulance network to transport patients to hospital complements the *Arogyasri* scheme. Innovative features of the scheme include the use of call centre technology to ensure rapid response time to emergencies. Another important benefit of the scheme has been the development of software for maintaining electronic medical records of an extremely large group of potential beneficiaries. A recent evaluation suggests that the scheme has significantly reduced the financial burden of ill health on the poor (Rao and Kadam, 2009). A major area of concern, however, is the financial viability of the programme. Indeed, the state government recently requested additional funds from the central government for the scheme, a request that was turned down.

Another large scheme financed primarily by India's central government is the *Rashtriya Swasthya Bima Yojana* (RSBY). The scheme is intended to cover all below-poverty line individuals/households in India. Although "poverty line" is not defined as liberally as under the *Arogyasri* scheme, this would still amount to some 280-300 million Indians. Currently coverage extends to about 40 million people. Under the auspices of the Indian Ministry of Labour, the scheme involves the central government (and smaller contributions from state governments) paying premiums to insurers on behalf of the poor, who are identified by local governments and by proxy means tests. The insurers are responsible for issuing a "smart card" to the poor in order for the latter to access designated types of care at empanelled public and private hospitals. Annual coverage is a maximum of INR 30,000 (about USD 650). The smart cards are also expected to create a medical history for their holders and serve as a useful device to monitor health spending by insurers. The scheme is currently being rolled out in different states of India. Although no systematic evaluations are as yet available, there is some anecdotal evidence of supplier-induced and inappropriate use of health services under the scheme (personal communication with Nishant Jain, Consultant to the Ministry of Labour, Government of India).

Lessons for other countries in the region

India's experience with interventions to address income security for the elderly and the non-elderly population offers a number of interesting insights to policy-makers in the region,

particularly from countries that have similar characteristics: namely, a significant informal sector, considerable regional and cultural diversity within country, a resource-constrained environment (despite its recent rapid growth) and large numbers of poor people. To be sure, one might argue that its democratic political structure permits (and creates demand for) a more open discussion at the decision-making table; but equally it can be argued that the poor have less influential lobbies, and may be "too patient" with the system (Drèze and Sen, 1995). Another area where India may be more advantageously placed than some of the other less well-off countries is in terms of its capacity to design and implement programmes, although again, relative to the size of the country, such capacity is limited, particularly in the public sector.

We believe that the main lessons from the Indian experience that apply to other countries can be divided into three areas: the appropriate role of the public and private sectors, and the division of responsibility between the national government and lower levels of government when funding is provided primarily by the government; the relative roles of tax financing versus contribution-based approaches; and programme implementation (including targeting beneficiaries, management capacity and evaluation).

The role of public and private sectors and the division of responsibility between different levels of government

The Indian experience, with both pensions and insurance against financial risks from ill health, points to the important role that private providers can play, even when substantial financing is coming from public-sector sources. In the case of the National Pension Scheme (NPS), private fund managers competed for the right to manage funds contributed by employees and the government, leading to some of the lowest fund management fees anywhere in the world, while recently providing an average of 14.5 per cent returns (across the different asset classes). Indeed, the EPFO (Employees' Provident Fund Organization) copied the NPS model for the management of its own funds and achieved much higher returns for its contributors than in any previous year. Partly as a response to the performance of these funds, there has been a move to transfer funds under micro-pension schemes in the state of Rajasthan that are currently being managed on a notional defined contribution (NDC) basis by its government to the fund managers of the NPS (Shanker and Asher, 2009). Co-contributory micro-pension schemes offer another example with private sector players being potential managers of funds, developers of products, and distributors

of payments, and the government as a co-contributor. The private management of tax-financed health insurance programmes – specifically *Arogyasri* and RSBY – offers another noteworthy example. Here, competitive bids were invited from private insurers to manage government funds (provided on a per capita basis), administer claims and manage health-care provider interactions with patients, with the balance left over being treated as profit to the insurer. Moreover, the health insurance funds could be used to pay health-care services received either from empanelled private or public providers. Other relevant examples of public-sector financing and private provision exist. Under the *Janani Suraksha Yojana* (JSY) of the National Rural Health Mission, private providers have been used to provide maternity services whenever public-sector provision is unavailable or inadequate. A related scheme, the *Chiranjeevi Yojana*, launched in Gujarat in 2005, had the state government contracting with private providers for childbirth delivery services for poor women in return for a fixed payment (McNamee and Acharya, 2009). While no systematic evaluation exists, this scheme appears to have reduced maternal mortality significantly. Other examples of health services being contracted out to the private sector in this type of contracting framework include diagnostic services in some hospitals in Andhra Pradesh, the empanelment of private providers in government financed insurance schemes, the management of primary health centers in Karnataka, and a variety of health education campaigns. And in the micro-credit arena, public-sector commercial banks and refinance institutions (such as NABARD) have relied on non-governmental organizations, self-help groups and microfinance institutions to promote lending to small borrowers. The general point is that even as government financing is used to overcome market failures, autonomy of management of these funds, private provision (in some cases), and innovative practices can yield efficiency gains particularly if public-sector capacity in service provision or fund management is inadequate.

There are, however, some areas of longer-term concern, although the experience with many of these programmes is far too limited to permit corroborating evidence. Specifically, existing health fund management arrangements may be attractive to private insurers (at current levels of financial contributions) only if claims rates remain low – in the longer run, these programmes may end up back on the government's lap as claims rates rise with population awareness. This may not be a major issue immediately in light of the present low claims ratios overall under RSBY or *Arogyasri*, but it does call for stronger oversight to maintain programme sustainability. In the case of the *Chiranjeevi Yojana* scheme, there have been reports of contracted doctors

seeking to exit the scheme on account of lack of profitability (McNamee and Acharya, 2009). Fraudulent billing by hospitals is emerging as a problem, although evidence in the context of *Arogyasri* and RSBY is unavailable in India (Narayan, 2010). Inadequate regulatory oversight with respect to health providers is another concern, given the considerable variation in quality that exists across private providers (Das, Hammer and Leonard, 2008). A related insight from the Indian case has to do with the effectiveness of public-sector service providers as competitors to private providers. Efforts to enhance public sector efficiency via promoting autonomy and so forth are likely to run into challenges from a group – public-sector personnel – who may have strong interests in maintaining the status quo of job security and limited accountability. This can turn out to be important when policy-makers seek to introduce competition among providers or fund managers as a means to promote efficiency in care provision. In general, with a few exceptions, the public sector has not been able to compete effectively for public funds thus far – whether in the right to manage pension funds, or as healthcare providers seeking funds from publicly-financed insurance. Public hospitals in Kerala have been effective in attracting RSBY funds owing to a more engaged leadership and investments in service quality and infrastructure. This, however, is not the norm. Moreover, in the longer run, medical personnel in public-sector health facilities may well be attracted away to the private sector, thus curtailing competition, as indeed seems to be already happening.

The other set of lessons emerging from the Indian experience relate to the appropriate roles of the national government and that of the state and lower level governments. In a number of programmes, the central government has provided financing, technical guidance and overall vision, but has left the actual implementation of the programme to state governments (e.g. the national old-age pension scheme, the *Indira Awas Yojana*, for housing the poor), and some responsibilities have even devolved to local governments (such as the identification of the beneficiaries). This is obviously the case for RSBY. In the case of the National Rural Employment Guarantee Scheme, local governments have important inputs into the design of specific work programmes and the identification of beneficiaries. The key role of local inputs in the design of programmes even as the central government remains the main programme funder is a common theme across several central government-funded programmes, and is in line with theory on local public goods. Centralized financing and technical support may also help address inter-regional equity and human resource capacity constraints. Moreover, there has been some

effort to address moral hazard issues in centre-state fiscal relations – specifically, central governments have been requesting state governments to match their contributions – which are mandated under the RSBY programme and "recommended" under the National Old Age Pensions scheme.

Again, there have been cases of local and political capture of funds; such as under the rural employment guarantee scheme and the *Indira Awas Yojana*. Difficulties have also arisen in the identification of beneficiaries under the different programmes. Moreover, not all state governments have the oversight capacity to manage private-sector operators or grant funds from the central government, as is becoming apparent under the National Rural Health Mission (Gill, 2009). This issue is further addressed below.

Financing from general revenues versus other sources of funds

A second feature of the Indian experience (and indeed from many other countries in Asia, including Thailand and Sri Lanka) is that despite efforts to promote private financing and mandated contributions to social insurance in the interests of sustainability, any significant scaling up of programmes that address income insecurity will require significant and continued reliance on financing from general revenues. This reflects the fact that any significant expansion of coverage will include large numbers of poor who are unlikely to participate in programmes that either require voluntary contributions, or programmes that require mandatory contributions.

In India, efforts to enhance private voluntary financing, or mandated contributions, include the NPS, which has a mandated contributory component, with equal contributions by government employees and the government (as the employer), and a voluntary component composed solely of employee contributions for retirement. Recently, the voluntary component of the NPS has been extended to any individual who seeks to contribute in order to benefit from its professional fund management. Allowing for entry of private providers in the insurance business (including life and health insurance) after 1999 and the set up of the Insurance Regulatory and Development Authority (IRDA) is another example of government efforts to promote voluntary health and life insurance (including annuities) coverage. These efforts reflect a government policy emphasis requiring at least the better-off groups to rely on their own contributions, both for reasons of equity as well as for enhancing programme affordability. In the case of the NPS, government efforts to introduce employee contributions and individual accounts stemmed also from policy-

makers' concern about the fiscal impact of defined benefit pension plans for its employees. Mandated contributions to the EPFO essentially cover employees in the formal sector who tend to be economically better placed than other segments of the working-age population. Both the RSBY and *Arogyasri* health insurance schemes also make some effort to exclude the non-poor. In the case of the former, this is accomplished through proxy means tests. In the case of the latter, the exercise takes the form of excluding households that do not possess "ration cards", usually given to those with low economic status. Similarly, efforts that have sought to promote micro-pensions and micro-health insurance by means of regulatory guidelines for insurers aim to attract contributions by the marginally non-poor for addressing income insecurity. Overall, programmes relying on private-sector action cover no more than 10-15 per cent of the total population. This excludes policy measures that penalize children for not supporting their elderly parents and that promote expanded property rights for women.

These efforts notwithstanding, recent government programmes to address economic insecurity are financed primarily from general revenues in India. In the case of programmes specifically directed towards the poor elderly, "social pensions" are the most obvious manifestation of this tendency to rely on general revenues, whether funded by the central or state governments. Other examples include government subsidies for housing as well as funds for the massive National Rural Employment Guarantee Scheme, which is funded entirely out of central government funds. In the case of health, the RSBY, the National Rural Health Mission and the *Arogyasri* schemes are also supported from general revenues. To the extent that India's recent rapid economic growth (and consequent expansion in tax revenues) underpins these developments, the sobering conclusion is that in many low-income countries, significant expansion (or introduction) of similar programmes (even on a smaller scale to that of India) may well have to be conditioned on substantial economic progress. That said, the small- or medium-scale expansion of social protection programmes can potentially help spur the economic growth that is necessary to allow for larger-scale programmes.

Implementation: Achievements and challenges

The Indian experience also provides a number of insights into the challenges of programme implementation. First, there is the issue of identifying beneficiaries to whom programmes are directed – such as the poor and the elderly. India has experimented with a number of different

programmes to identify the poor and the elderly, such as proxy means assessments based on household surveys (RSBY), self-targeting (national rural employment guarantee scheme), identification with the help of local governments (social pensions), occupational and caste characteristics (*Indira Awas Yojana* in the case of housing), and whether households to which individuals belong hold ration cards or not. In general, targeting strategies focused on proxy means require repeated household assessments to adequately address the dynamic nature of poverty – specifically, movements into and out of poverty. Similarly, strategies based on identification by the local government are often characterized by local political capture, with benefits often going to supporters of the major political parties (Srivastava, 2004). Two responses that appear to have been more effective in the Indian context are a relatively cheap option (self targeting as under the employment guarantee scheme) as well as more expensive but "generous" targeting device used for the *Arogyasri* scheme that defined all ration-card holders (80 per cent of the population of Andhra Pradesh) as poor. Another feature of targeting in the employment guarantee scheme is the public availability of information on all beneficiaries (and payments received), and thus the possibility for "social audits" involving local communities and non-governmental organizations.

The difficulty of assessing ages for social pension recipients and ensuring that the intended "recipients" are not deceased implies that birth and death registration ought to be a priority step for many developing countries. India's recent efforts towards creating a unique identification number for each Indian, which also uses biometric information, constitutes an important step in this direction.

Second, the use of information technology-based platforms – whether in the form of providing detailed and publicly-available information on beneficiaries under the employment guarantee scheme; the creation of smart cards for RSBY that are used to identify beneficiaries, track health care use and claims (and similar systems for *Arogyasri*); or the system for tracking fund contributions, allocations and accumulations in the NPS – is central to the administration of many of the new schemes being set up in India. This movement away from a paper-based system is likely to increase transparency and speed up transactions. Thus, under the RSBY and *Arogyasri*, claims are processed directly via an exchange of information between the providers of care and the insurer, with the patient not incurring any out-of-pocket expenditure under this "cashless" system. Individuals can now allocate their funds to be invested under the NPS online,

just as in many developed countries. Some states like Andhra Pradesh have also transferred information on property ownership and registration onto the Internet, thereby enabling speedier property transactions. By contrast, the EPFO – the organization that manages social insurance funds – continues with paper-based information, with accompanying delays and beneficiary data that are out of date. Indeed, the emergence of IT-based platforms is likely to increase the ease with which contributions and accumulations (or health benefits) can be tracked even as individuals move across jobs and geographical regions. This is already happening with the extension of the voluntary component of the NPS to individuals in the informal sector. There has also been some discussion of extending banking services to rural areas via mobile devices, reducing the cost of financial transactions in that population segment.

At the same time, India faces a number of difficult challenges with regard to the effective implementation of its programmes. These include, first, human resources to manage insurance and other funds. In the case of managers of health insurance, skills related to the design and implementation of sophisticated payment systems involving the use of DRG (Diagnostically Related Groups), pay for performance, and global budgets are in short supply. The need for such capacity is apparent from the recent claims history under the RSBY health insurance scheme that suggests significant supplier-induced demand for health services (communication with Nishant Jain, consultant Ministry of Labour, India).

A second major area of concern is the lack of evaluation of many of these innovations. Although the National Rural Employment Guarantee Scheme has attracted much research attention in India, much less is known about the effectiveness of programmes such as IAY, NOAPS, RSBY and *Arogyasri*. Little is known about the implications of existing payment practices on health spending under different government-funded schemes. Nor has any systematic analysis been conducted on the long-term viability of programmes that are in place or being introduced. A recent sharp cutback in *Arogyasri* funds for 2010-2011 reflects the need for careful and ongoing programme assessment. Concerns about the lack of evaluation of the National Rural Health Mission have been noted elsewhere (Gill, 2009). This state of affairs reflects not just a lack of political interest in outcomes but also the need for good data. For instance, there is a need to develop databases on morbidity and mortality outcomes, disease indicators, and socio-economic indicators.

Final concluding thoughts

Although not highlighted above, it is important to appreciate that many of the programmes described above are underpinned by India's specific political and economic circumstances. The *Arogyasri* scheme was the flagship programme of the former Chief Minister of the state of Andhra Pradesh and an important factor in the landslide win of his party in the last elections. Indeed, the recent increase in similar programmes in other Indian states may well reflect the winning politics of health insurance. The Congress party, to which the Chief Minister of Andhra Pradesh belonged, has also introduced programmes for the less well-off financed by general tax revenues, such as the employment guarantee scheme, and the various health insurance plans and the housing scheme. The ongoing rapid economic growth has encouraged these efforts by its impact on tax revenues that have increased significantly in recent years.

The rising economic inequality that has accompanied India's economic growth has also fed a politically-driven demand for social protection programmes. As India's population continues to age, the aware public will seek to have such programmes (both in the arena of health insurance and old-age economic security) cover a greater share of the population. Although the challenge of doing so will be immense, and most of the funding will necessarily be tax-financed, the programmes already in place offer a good starting point for expanding social security.

Most broadly, researchers in India and elsewhere might benefit by comparing India's social security efforts with those of other countries that have similar per-capita income and labour market conditions. Such a comparison could yield insights about the design of programmes and their fiscal sustainability (For a broad study of social protection programmes across Asia, see Bloom et al., forthcoming 2010).

Bibliography

Agarwal, B. 1995. *A field of one's own: Gender and land rights in Asia*. Cambridge, Cambridge University Press.

Asher, M. 2009. "Pension plans, provident fund schemes and retirement policies: India's social security reform imperative", in *ASCI Journal of Management,* Vol. 39, No. 1.

Asher, M. 2010. *The global economic crisis: An opportunity for strengthening Asia's social protection systems?* (Working paper, No.198). Tokyo, Asian Development Bank Institute.

Asuncion-Mund, J. 2007. *India's capital markets: Unlocking the door to future growth*. Frankfurt, Deutsche Bank Research. <http://www.db.com/spain/content/downloads/DB_Research_Current_Issues_070214.pdf> (accessed on 14.06.2010).

Barr, N.; Diamond, P. 2009. "Reforming pensions: Principles, analytical errors and policy directions", in *International Social Security Review*, Vol. 62, No. 2.

Basu, P.; Srivastava, P. 2005. *Scaling up microfinance for India's rural poor* (Draft). New Delhi, National Council for Applied Economic Research.

Bloom, D. E. et al. 2010. *Enhancing social protection initiatives in the developing member countries* (Report to the Asian Development Bank). Boston, MA, Harvard School of Public Health (forthcoming).

Casey, B. H.; McKinnon, R. 2009. "Social pensions and policy learning: The case of southern Africa", in *International Social Security Review*, Vol. 62, No. 4.

Chen, M. 1998. *Widows in India*. New Delhi, Sage.

Cichon, M.; Hagemejer, K. 2007. "Changing the development policy paradigm: Investing in a social security floor for all", in *International Social Security Review*, Vol. 60, No. 2/3.

Das, J.; Hammer, J.; Leonard, K. 2008. *The quality of medical advice in low income countries* (Policy research working paper, No. 4501). Washington, DC, World Bank.

Deshingkar, P.; Akter, S. 2009. *Migration and human development in India* (Draft). London, Overseas Development Institute.

Dey, S. 2010. *Evaluating India's national rural employment guarantee scheme: The case of Birbhum District, West Bengal* (Working paper, No. 490). The Hague, Institute of Social Studies.

Drèze, J.; Khera, R. 2009. "The battle for employment guarantee", in *Frontline*, 16 January.

Drèze, J.; Sen, A. 1995. *Economic development and social opportunity*. New Delhi, Oxford University Press.

Drèze, J.; Srinivasan, P. 1997. "Widowhood and poverty in rural India: Some inferences from household survey data", in *Journal of Development Economics*, Vol. 54, No. 2.

ESA. 2009. *World population prospects: The 2008 revision.* New York, NY, United Nations Department of Economic and Social Affairs – Population Division. <http://esa.un.org/unpp/index.asp> (accessed on 19.07.2010).

Gill, K. 2009. *A primary evaluation of service delivery under the National Rural Health Mission (NRHM): Findings from a study in Andhra Pradesh, Uttar Pradesh, Bihar and Rajasthan* (Working paper, No. 1). New Delhi, Planning Commission of India.

Government of Andhra Pradesh. 2009. *Andhra Pradesh Self Help Groups (SHG) Women Co-Contributory Pension Act 2009.* Hyderabad. <http://www.rd.ap.gov.in/insurance/AbhayaHastam_Bill.pdf> (accessed on 19.07.2010).

Government of India. 2007. "Maintenance and welfare of parents and senior citizens Act, 2007", in *Gazette of India* (Extraordinary), 31 December. http://socialjustice.nic.in/oldageact.php?format=largeprint> (accessed on 19.07.2010).

Government of India. 2009. *National health accounts, 2004-05*. New Delhi, Ministry of Health and Family Welfare.

Holzmann, R.; Hinz, R. 2005. *Old age income support in the 21st Century: An international perspective on pension systems and reform.* Washington, DC, World Bank.

Holzmann, R.; Jørgensen, S. 2000. *Social risk management: A new conceptual framework for social protection, and beyond* (Social protection discussion paper, No. 0006). Washington, DC, World Bank. <http://info.worldbank.org/etools/docs/library/80363/conceptfram.pdf> (accessed on 19.07.2010).

Jha, R. et al. 2009. "'Capture' of anti-poverty programs: An analysis of the National Rural Employment Guarantee Program in India", in *Journal of Asian Economics*, Vol. 20, No. 4.

Krishna, A. 2007. "For reducing poverty faster: Target reasons before people", in *World Development*, Vol. 35, No. 11.

Mahal, A.; Varshney, A.; Taman, S. 2006. "Diffusion of diagnostic medical technology and policy implications for India", in *International Journal of Technology Assessment in Health Care*, Vol. 22, No. 2.

McKinnon, R. 2002. "Social risk management: A conceptual fallacy of composition", in *Risk Management: An International Journal*, Vol. 4, No. 4.

McNamee, P.; Acharya, A. 2009. *Public-private partnerships to reduce maternal mortality: Silver bullet and smoking gun?* (Conference paper, XXVI International Population Conference, Marrakech, 27 September-2 October). <http://iussp2009.princeton.edu/download.aspx?submissionId=93495> (accessed on 06.08.2010).

Miller, C. 2006. "Microcredit: Why India is failing", in *Rediff India Abroad,* 10 November. <http://www.rediff.com/money/2006/nov/10spec.htm> (accessed on 06.08.2010).

Ministry of Health and Family Welfare. 2009. *National health profile of India, 2009*. New Delhi, Directorate General of Health Services – Central Bureau of Health Intelligence.

Mohan, B. K. 2008. "Andhra villagers now have pension on their fingertips", in *Business Standard*, 2 September.

Morduch, J. 1995. "Income smoothing and consumption smoothing", in *Journal of Economic Perspectives,* Vol. 9, No. 3.

Narayan, P. 2010. "Hospitals complain to IRDA as insurance companies pull the plug", in *Times of India*, 10 July. <http://timesofindia.indiatimes.com/india/Hospitals-complain-to-IRDA-as-insurance-cos-pull-cashless-plug/articleshow/6149759.cms> (accessed on 06.08.2010).

National Sample Survey Organization. 1987. *National sample survey: 43rd round*. New Delhi, Ministry of Planning and Policy Implementation.

National Sample Survey Organization. 1996. *National sample survey: 52nd round*. New Delhi, Ministry of Planning and Policy Implementation.

National Sample Survey Organization. 2004. *National sample survey: 60th round*. New Delhi, Ministry of Planning and Policy Implementation.

Pal, S. 2004. *Do children act as old age security in rural India? Evidence from an analysis of elderly living arrangements*. Cardiff, Cardiff Business School.

Pandey, S. 2005. *Property rights of Indian women*. <http://www.muslimpersonallaw.co.za/inheritancedocs/Property%20Rights%20of%20INdian%20Women.pdf> (accessed on 06.08.2010).

Pandey, M. 2007. “HelpAge silver lining for senior citizens”, in *Hindustan Times*, 16 May. <http://www.hindustantimes.com/HelpAge-silver-lining-for-senior-citizens/Article1-223136.aspx> (accessed on 06.08.2010).

Planning Commission. 2007. *Report of the Working Group on Competitive Micro-Credit Market in India: The Eleventh Five-Year Plan*. New Delhi, Planning Commission – Development Policy Commission.

Prasad, G. 2009. “MP, AP unveil first public-private pension scheme”, in *The Economic Times*, 29 August.

Radermacher, R. et al. 2005. *Yeshasvini Trust, Karnataka, India* (Good and bad practices case study, No. 20). Geneva, CGAP Microinsurance Working Group. <http://www.microhealthinsurance-india.org/content/e22/e61/e651/e841/Yeshasvini_Trust_final.pdf> (accessed on 06.08.2010).

Rajan, I. 2007. *Population ageing, health and social security in India* (Discussion paper, No. 3). Osaka, Osaka City University – Centre for Research on Economic Inequality.

Rao, M.; Kadam, S. 2009. *A rapid evaluation of the Rajiv Arogyasri Community Health Insurance Scheme: Andhra Pradesh – Final report*. Hyderabad, Indian Institute of Public Health.

Registrar General of India. 2009. *Abridged life tables for India, 2002-2006*. New Delhi, Ministry of Home Affairs.

Sastry, N. S. 2007. *Estimating informal employment and poverty in India* (Discussion paper, No. 7). New Delhi, United Nations Development Programme – Human Development Resource Centre.

Shah, A. 2006. “Indian pension reform: A sustainable and scalable approach”, in D. Kelly et al. (ed.), *Managing globalization: Lessons from China and India*. New York, NY, World Scientific.

Shanker, S.; Asher, M. 2009. *Developing micro-pensions in India: Issues and challenges* (Draft). Singapore, National University of Singapore – Lee Yuan Kew School for Public Policy.

Sood, J. 2010. “Government tardy in implementing act on parents, elderly”, in *The Tribune*, 21 January. <http://www.tribuneindia.com/2010/20100122/punjab.htm> (accessed on 06.08.2010).

Srivastava, P. 2004. *Poverty targeting in Asia: Country experience of India* (ADBI Discussion paper, No. 5). Tokyo, Asian Development Bank Institute. <http://www.adbi.org/files/2004.02.05.dp005.poverty.india.pdf> (accessed on 06.08.2010).

Unni, J. 2002. *Size, contribution and characteristics of informal employment in India* (Draft). Ahmedabad, Gujarat Institute for Development Research.

Venkatesh, M. 2008. "Crop insurance in India: A study", in *Journal of the Insurance Institute of India*, January-June. <http://www.insuranceinstituteofindia.com/InsuranceInst/Publication/Uploads/Journal-Jan-June-2008/Journal08_%20pg15-17.pdf> (accessed on 06.08.2010).

Visaria, P. 1999. *Demographics of ageing in India: An abstract* (Draft). New Delhi, University of Delhi – Institute of Economic Growth.

World Bank. 2009. *World development indicators (WDI) 2009*. Washington, DC. <http://data.worldbank.org/data-catalog/world-development-indicators/wdi-2009> (accessed on 19.07.2010).

Yadav, S. 2010. "Beyond the count", in *India Today*, 25 March. <http://indiatoday.intoday.in/site/Story/89821/Nation/Beyond+the+count.html> (accessed on 06.08.2010).

Yip, W.; Mahal, A. 2008. "The health care systems of China and India: Performance and future challenges", in *Health Affairs*, Vol. 27, No. 4.