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CRISIS OF AGEING IN LESS DEVELOPED COUNTRIES. A CRISIS FOR WHOM? SOME CONCEPTUAL AND POLICY ISSUES

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Abstract

The age structure in many developing countries is changing - the population is ageing. There is an increasing concern over the social and economic costs of caring for this ageing population. It is the capacity of state to finance the expected rising social expenditure that has come to dominate the debate on the economics of population ageing. In this context the elderly are considered primarily as consumers and 'dependent' on the working population. Such a view of the elderly, this paper argues following the Keynesian and post-Keynesian literature, is incorrect. Firstly, empirical evidence shows that the aged do not consume (relative to their income) more than the rest of the population. Second, the issue of 'dependency' of the aged should be put in the broader context of the dependency of the unemployed and under-employed in a market economy. Third, focus of the debate should move away from consumption and towards production. Finally, since the old make claims on the national output on the basis of their accumulated assets, savings and pensions the distributional issues (in relation to assets as well as incomes) have be an integral part of any pension system in order to alleviate poverty among the elderly.

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1. INTRODUCTION: PUBLIC POLICY AND THE SOCIAL IMPLICATIONS OF AGEING

Population ageing (a rise in the proportion of the elderly, e.g. those over the age of 55, or 60, in total population, and a rise in the median age) is a twentieth century phenomenon. This has first been experienced in the developed countries (DCs) where decline in fertility had raised many issues related to the social and economic implications of ageing, issues such as the physical and psychological care of the elderly, institutional arrangements needed for an ageing population, and private and public finance implications of ageing. [1]

With the onset of demographic transition in less developed countries (LDC) and the decline in the importance of family based and other traditional, and often informal, institutions for the care of the elderly the ageing of the population has increasingly become a matter of public policy. The immediacy of the problem stems, in part, from a much faster pace of ageing in LDCs than DCs. For example, the share of those over 60 in total population in China will double in 34 years, and in Venezuela in 22 years, as compared with the 100 years that Belgium took. (World Bank, 1994) This gives the impression of a crisis looming over LDCs, as the title of the recent World Bank (1994) study suggests - *Averting the Old Age Crisis.*

But is there going to be a crisis, and if so what type of crisis and who is going to bear the cost of the crisis? The reposes of much of the current literature is in the affirmative and that the crisis is one of financing the care of the elderly, and it is the state and ultimately the working population who are going to bear the cost. An OECD document summarises this view neatly: [it is the] 'concern over the capacity to finance projected increase in social expenditure [that] is at the centre of the debate over the social implications of population ageing.' (OECD, 1988, p. 54)

With so much concern over the financial implications of ageing it is appropriate to ask at the outset whether ageing should be a matter for public policy. The answer is a categorical yes! Because whilst it is true that ageing is a personal experience, it does not follow that population ageing is an individual matter. There are other analogies in population field. For example, birth and death are personal experiences, but fertility, mortality and population growth are not, and they have, at least for decades if not centuries, been matters of public policy and public discussion. Population ageing in as far as it affects labour supply, aggregate consumption, savings, investment and therefore growth has macro economic implications far beyond the effect of ageing on individuals. This provides the backdrop to much of what is discussed in this paper.

We begin with a brief discussion of the concept of ageing. This will be followed by an overview of the literature on economics of ageing which focuses on main concerns of the neo-classical economics in its analysis of ageing, i.e. consumption and savings. The paper will then go on to discuss alternatives to the neo-classical approach, and argues the need for taking into account gender relations in ageing and for refocusing the debate on production and growth issues. The economic policy implications of ageing are dealt with in section, 3 - Ageing and Economic Policy Issues, where the recent World Bank document on the subject will be critically examined. The paper ends with some concluding remarks in section 4.

1. 1 The Concept of Ageing

One of the most common definitions of demographic ageing is the rise in the proportion of 'old' people in the total population.[2] This definition has to be clarified, first with respect to the definition of 'old,' and second to that of the underlying reasons for the rise in the proportion of 'old' people in the population. In defining who the 'old' are we should draw a clear distinction between biological ageing, which closely correlates with chronological age, and socially constructed notions of ageing such as retirement age.

The official definition of ageing is related to the normal retirement age that varies from 55 to 65. Table 1 provides a snap shot view of the average normal retirement age by groups of countries. However, formal retirement should not necessarily be equated with a withdrawal from the labour force. (See Hurd, 1990: 596)

More often than not the functional age goes well beyond the official chronological retirement age, and many people can and are in fact productive beyond their official retirement age. The retirement age in the word of some commentators has the 'function of clearing jobs for the younger generation.' [3]

Table 1 The Average Normal Retirement Age, 1991. (a)

	Women	Men
Sub-Saharan Africa	56.0	56.2
Asia (b)	55.6	56.5
Middle East and North Africa	57.8	60.4
Eastern Europe and Former Soviet Union	55.3	60.3
Latin America and the Caribbean	58.7	60.8
OECD	62.9	64.4

(a) Averages based on figures for selected countries within each group.
(b) Includes China and India.
Source: World bank (1994), table A.7, pp. 364-368.

A number of points are in order in relation to the 'age of ageing ... [that is] the average age the individual passes the invisible frontier of failure to cope with the expected work load or responsibilities of the indigenous culture.' (Tout, 1989) In this respect any society's treatment of ageing is closely related to the way in which it organises its productive activities.

With more control over productive activities and building up of reserves care of elderly becomes easier. At the same time development of property rights and control over resources grant certain power to older generations giving them status in the community. In short ageing is much more graceful if you have accumulated knowledge and economic resources (financial and otherwise) or have access to a pool of resources provided by the community. Being old is also related to the society's evaluation or perception of one's contribution and of one's role. The rich and the powerful usually age 'later' than the poor, in part because of the control that they keep over the assets of their community and society.

Gender aspects of the notion of 'old', are closely related to the economic power of women and the society's perception of their social role. If motherhood is seen as a major role for women, then menopause is often used as a popular cut off point for referring to a woman as 'old.' However, in general, control over economic resources and the organisation of power within the household and in the society at large would have a strong bearing over the attribution of old to an individual. The British Queen (who turned 70 in 1996) is rarely referred to as an 'old woman!'

With the development of the modern educational system with its systematic inter-generational transfer of knowledge and information, the older generation not only has lost some of its advantages over the young but in fact is being disadvantaged by the development of economic activities requiring some basic level of literacy. Technological change that has always been a source of skill obsolescence has affected the older workers more than the young ones. Most employers with access to a large pool of younger workers prefer to retrain the younger generation for the new skills.

The use of retirement age as a cut off point to define 'old' is a 20th century development. In the UK the depression and mass unemployment of the 1930s led to the adoption of a retirement policy to increase labour demand for the younger workers. It was argued that it is better to pay retirement benefit to the older workers, to ease them out of employment than pay unemployment benefit to the young. (Phillipson, 1983) [4]

It is clear that the concept of ageing is historically determined, varies across different societies and it is closely related to gender relations and to individual's economic and social position within them. To operationalise such a concept for theoretical and empirical work is no easy task, especially if one deals with a diverse group of countries at various stages of economic development. The official definition which invariably is based on the retirement age is a useful starting point for it provides a common concept across different countries. However, from the point of view of an economy's potential to provide for its elderly population it is the functional age which matters and is the most useful concept. The functional age in turn varies according to the economic activity one is engaged in and hence differs across different professions and sectors. In this paper we use mainly the retirement age for international comparisons. But references will also be made to the functional age when exploring economic potential of a country to care for its ageing population.

This economic potential also critically depends on the relative size of the non-working age (both old and young) to the working age population; a ratio which is closely related to the underlying causes of demographic ageing - the increase in the proportion of old to total population. Note that this ratio would initially rise because of a decline in fertility and only later decline because of a decline in mortality.

This sequencing of causes is important because of its implications for policies to handle a changing age structure. Fertility decline of a population with a young age structure (like that in most LDCs where those below the age of 15 account for more than 50% of population) means that the working age population is going to increase, which potentially will help in the management of a rise in the number of the elderly.

2. Economics of Ageing in Development Literature

The economics of ageing in LDCs is a new subject in the development literature. Until the mid-1980s the economics of population has been almost exclusively concerned with the consequences of population growth and a young age structure.[5] The World Development Report of 1984: Population Change and Economic Development (World Bank, 1985), had only one page (p. 64) devoted to population ageing! In general any discussion of ageing has been in relation to other issues, such as the 'old age security ' argument for fertility decisions. (See, e.g., Hammer, 1986, Nugent, 1985, Nugent and Gillaspy, 1983, and Vlassoff and Vlassoff, 1980)

Since the late 1970s, however, there has emerged a considerable body of literature on health, and social aspects of ageing in developing countries that has mostly been published in journals dealing with ageing issues (e.g., *Gerontology, Ageing and Society*, and *Research on Ageing*) or in country case studies. Tout (1989) and K. Sen (1995) provide a comprehensive survey of this literature. The recently established World Health Organisation Global Programme on Ageing and Health is another example of the importance attached to this emerging issue in LDCs.

The ageing of population is fundamentally a macroeconomic issue. This was the starting point for the early discussions on the economic impact of a declining population and ageing. Keynes and others argued that population ageing, a consequence of a low fertility, would *reduce growth via its impact on aggregate demand and investment decisions*, and *not* because of a higher tax burden and government expenditure on social security and pension. (Keynes, 1937 Hansen, 1939, Harrod, 1939)

Hansen (1939) argued that it is the profitability of investment which is the driving force behind investment decisions. Price of capital has a secondary role in such decisions. Profitability in turn depends on demand. A growing population offers a secure demand, ensuring profitability and hence capital formation follows leading to economic growth. The most obvious area of capital formation with a growing population is in the field of construction industry. According to Hansen (Ibid.) 'the growth of population in the last half of the nineteenth century was responsible for about forty percent of the total volume of capital formation in western Europe and about sixty percent of the capital formation in the United States. If this is even approximately correct, it will be seen what an important outlet for investment is being closed by reason of the current rapid decline in population growth.' (p. 8) Moreover, in a declining economy demand for labour will also decline leading to a reduction in government tax revenue. The financial problems of the state are further aggravated by the elderly's health and care needs. (Reddaway, 1939)

An important aspect of these early discussions of economics of ageing is the way in which the consumption and production sides of the argument are integrated. This debate could also be viewed in terms of integrating the demand and supply implications of ageing. The more recent literature, with few notable exceptions (e.g., Cutler, et al., 1990, Jackson, 1994) is preoccupied with the consumption side and the need to restructure the social security structure. The following sections will provide a critical survey of this literature and its policy implications.

2.1 The Neo-classical Paradigm and Ageing: Consumption and Saving

The main debate in the economics of ageing has been over spending on social security, pensions, and health that would make an increasing claim against a hard pressed government budget. [6] At an abstract level it is the *needs* and *claims* (economic and otherwise) of an 'economically inactive' against the 'economically active' population that lies at the core of the debate on ageing, whatever the institutional arrangement to care for the elderly. This is an important point to note, particularly in a developing country setting, where the state in general plays a minor role (compared with the developed countries) in providing support for the elderly.

Competing claims over distribution of existing resources, like all distributional issues, involve conflicts. This is true whether at macro (country) or micro (household) level. At macro level the distribution of the social security budget, for example, between spending on pensions and health needs of the young could be a potential source of conflict between the old and the young. But for such a conflict to be realised there should exist institutions which could organise people on the basis of their age. There is very little evidence in the history of social and political movements to show that alliances and organisations have been formed strictly along age groups. Where such organisations exist they are usually attached to political parties. It is also important not to regard pensioners' associations (which are based more on a social category than on age) as an elderly association. At micro-level (e.g. family or household) conflicts could, and often do, arise between individuals (e.g. parents and children) over the distribution of income and assets. Moreover, the application of 'intergenerational' to macro level conflicts would conceal the more important conflicts, such as that between social classes and other interest groups that are formed on non-generational basis.

Is population ageing going to increase or decrease aggregate consumption? How does this affect savings? The economic analysis of the relationship between ageing, consumption, and savings has been dominated by neo-classical economics and the life-cycle hypothesis (LCH).

The LCH is based on the notion that individuals plan their consumption and savings behaviour over their life time in order to maximise their utility. (Modigliani and Brumberg, 1954 and Ando and Modigliani, 1963.) Individuals' consumption and savings decision are not only affected by their current income, but also by their future circumstances in the old age when their incomes fall sharply. The corollary of this argument is that people save when they are young in order to use these savings to maintain their standard of living in the old age. There are of course other motives (such as the desire to bequest) but as far as economic consequences of ageing are concerned the saving/dissaving behaviour is much more important.

Notwithstanding that the LCH is fundamentally a microeconomic theory of household behaviour, LCH has been used to predict the macroeconomic effect of ageing - a reduction in aggregate savings and an increase in aggregate consumption - hence the need for policies to increase current savings in order to reduce the future burden on the state expenditure.

The consumption and savings behaviours of households and individuals over time are fundamentally empirical questions. Using US household data in the early 1970s, Danziger, et al (1982) found that 'the elderly not only do not dissave to finance their consumption during retirement, they spend less on consumption goods and services (save significantly more) than the non elderly at all levels of income. Moreover, the oldest of the elderly save the most at given levels of income.' (p. 210) [7] According to the authors the most plausible explanation of such a saving behaviour is that the 'elderly households at the same current income levels as non-elderly households in a cross section are higher in the income distribution of their peers, and probably always have been.' (p. 226) At the same time while 'their human capital and private pension wealth is being depleted, especially at the most advanced ages', the elderly 'face a complex problem of uncertainty about their health, life expectancy, and their ability to maintain independent households. In these circumstances, they respond by maintaining their wealth in the only way available to them, reducing their consumption.' (p.226)

In applying the LCH to developing countries the earlier studies, interestingly enough, were not concerned with ageing directly, but with the effect of high fertility and population growth on savings and consumption. What lies behind this is the assumption, often erroneous, that the young and the old make negligible, if any, contributions to household income, and are therefore dependant on the working population. Here high fertility and ageing have similar effects on the age structure by raising the ratio of dependants to the whole population, hence the supposed rise in aggregate consumption and decline in savings.

A pioneering cross section study of selected developed and developing countries found that the young and old dependency ratios, respectively the percentage of the population aged 14 or less, and 65 or more, were significant determinants of saving ratios (the ratio of aggregate saving to income, and per capita savings ratio): the higher savings ratios are associated with lower dependency ratios. (Leff, 1969) Leff used these results to draw the obvious policy conclusion that what developing countries need is a policy of birth control to reduce the fertility rate.

His results indicate that the 'old dependency ratio' has a smaller negative effect on savings ratios than the young dependency ratio, hence a lowering of fertility will result in a higher savings ratio than otherwise would have been the case. It is surprising that, given his empirical results, there is no discussion on the policy implication of ageing in the article. His only comments on ageing appear in a footnote: 'the inclusion of the older age population as a factor reducing aggregate savings rates can be justified on two grounds. First, because of imperfect foresight (taken with such conditions as inflation and imperfect capital markets, increasing life span, and rising 'minimum' standards of living) they may not have made adequate provision for their non-productive years, and hence they constitute a drain on the income and discretionary expenditure of others. Secondly, they may be running down their stock of savings so that their ratio of current savings to income is very low. Hence, at any point in time, ceteris paribus, the higher the proportion of retired people in the population the lower the aggregate savings ratio.' (p. 889) Such an a priori argument does not, however, stand the tests of a closer theoretical scrutiny nor that of the empirical evidence. First let us look at the relationship between population growth and structure, on the one hand, and savings on the other.

The interaction between population growth and savings is the result of two effects - *dependency* and *rate of growth* - working in opposite directions. At household level, declining fertility is assumed to reduce dependency and consumption, but raise savings, this is the dependency effect. A declining population on the other hand reduces the number of people who are engaged in life cycle savings, this is the rate of growth effect. At macro level a decline in dependency raises the number of households who are engaged in life cycle saving thus raising aggregate savings. A similar effect on estate saving (that are undertaken, e.g. to provide bequest for children, to accumulate assets as protection against uncertainty) is predicted: a lower dependency raises the household's resources available for estate savings. The dependency effect on savings will be magnified if incomes rise at the same time. (Mason, 1988)

The rate of growth effect is similar to the macro level effect of a declining population on demand, investment, income and savings. Leff's results indicate that the dependency effect dominates over the rate of growth effects. By implication, *the net effect of population ageing, that is a reduction in the young dependency ratio, is that aggregate savings is higher than what has been predicted by the LCH.* In other words, since the young consume more than the old, population ageing will result in lower aggregate consumption, and hence higher savings, than would otherwise be the case.

Notwithstanding the contribution of Leff to our understanding of the relationship between dependency and savings, his results are far from conclusive, as other empirical works on the subject have demonstrated. Rati Ram (1982) estimated a Leff type savings function using 1970-77 data on various samples of developing and developed countries. His results indicate that in the less developed countries samples there is little evidence for the negative effect of young and old dependency ratios on aggregate savings.

It is important to note that while there is disagreement in the literature on the relationship between young dependency ratio and aggregate savings, there is broad agreement on the lack of empirical support for the negative relationship between old dependency ratio and aggregate savings.

The evidence from developed countries cast further doubt on the relationship between old age dependency and aggregate savings. An important recent study of the US economy (Cutler, et al., 1990) demonstrates that the preoccupation with the adverse effect of ageing on savings and the overburdening of the working population is misplaced. The authors argue that the economics of ageing have to be put in the broader perspective of saving and capital accumulation. The analysis of macroeconomic effects of ageing has to take account of the long term investment and consumption requirements needed to cope with a changing demographic structure. Their argument is related to the fact that the increase in the share of the elderly (65 and over) in the population takes place with a gradual decline in the share of the young (19 and under) and a rise in the share of those in the working age (20-64), with the last group being in near peak productivity.

The consumption and investment requirement of these different age groups will ensure that demographic change in the US is unlikely to worsen the economic performance in the US, at least in the next several decades. The authors conclude that 'in the short run, the demographic change will have two important effects. First, slowing population growth will permit a smaller share of national output to be devoted to investment in plants, equipment and housing. Second, the share of the population that is working will rise, largely as a result of the falling relative population of children. These positive effects of demographic change may be reinforced by increased foreign capital inflows and accelerating technical change as firms

respond to an increasing scarcity of labour.' (p. 53)
The above study has several important lessons for the analysis of ageing in LDCs. The first is related to the growth of labour force, since much of the debate on the looming economic crisis of an ageing population rests on the size and growth of labour force.

Table 2 presents selected data from the latest UN demographic estimates (for 1960 and 1990) and projections (for 2020 and 2050). According to the data the share of working age (15 - < 60) in total population will rise in most developing countries well into the 21st century. (UN, 1995) This is due to declining fertility which ensures that the proportion of the old (60 - >) in population is also on the increase. Given that the share of the old in total population is rising faster than the share of the working age, the ratio of old to working age population is also on the increase implying that each working person has to support a larger number of older people. At the other end of the age spectrum there is a sharp decline in the share of the young (0 - < 15) and a marginal increase in the number of young who have to be supported by the working age population. These changes vary across developing countries. In general the lower the per-capita income the faster the rise in the share of the working age population and the slower is that of the old.

Among the lower income countries reported in table 2 population of Mozambique is ageing at the slowest pace. The share of old in population increased from 4.9 percent in 1960 to 6.3 in 2050. Compare this with China whose old population rises from 7.2 percent in 1960 to 24.7 percent in 2050. Such differences simply reflect the fact that these countries are at different stages of their demographic transition, the earlier the decline in fertility occurs, the faster will be the process of ageing, which is clearly demonstrated in the case of the middle income developing countries. The more significant point from the point of view of support for the elderly is the growth in the working age population. In Mozambique's case this share declined slightly between 1960 (53.7 percent) and 1990 (50.5 percent) but will rise sharply in the next century to 54.7 percent in 2020 and 68.1 percent in 2050. All other developing countries will have a similar experience in the first 20 to 30 years of the next century. This trend will be reversed in some countries, in particular for those in the middle income group. For example by the year 2050, the share of working age population in Algeria and Brazil will decline to 59.2 and 57 percent respectively. Such countries' age structure will be similar to that of the high income (developed) countries in 1990. Given that at least in the next 30 years the share of working age population of almost all developing countries is on the rise and the decline for some will not take place until 40 years time, these economies have ample time to plan for the changing age structure.

Table 2 Percentage Distribution of Population by Age Group, Selected Countries, 1960,1990, 2020, 2050.

	Estimates (i)						Projections (ii)					
Country	**1960**			**1990**			**2020**			**2050**		
Low Income	**0 - < 15**	**15- <60**	**60 - >**	**0 - < 15**	**15- <60**	**60 - >**	**0 - < 15**	**15- <60**	**60 - >**	**0 - < 15**	**15- <60**	**60 - >**
Albania	41.4	50.8	7.8	32.7	59.5	7.8	22.4	63.8	13.8	19.3	57.6	23.1
Bangladesh	40.9	52.9	6.2	41.8	53.4	4.8	26.5	65.7	7.8	19.7	61.2	19.1
Cameroon	39.8	54.5	5.7	44.7	49.7	5.6	38.6	55.5	5.9	24.7	63.9	11.4
China	38.9	53.9	7.2	27.5	63.9	8.6	20.7	63.8	15.5	19.3	56	24.7
Egypt	42.5	52	5.5	39.7	54	6.3	25.3	64.1	10.6	20.2	59.6	20.2
Ghana	45.6	50.2	4.2	45.4	50.1	4.5	38.3	55.9	5.8	24.3	64.2	11.5
India	39.8	54.5	5.7	36.3	56.8	6.9	24.8	64.3	10.9	19.5	59.8	20.7
Kenya	45.6	48	6.4	49.2	46.3	4.5	39.5	56.2	4.3	24.3	63.9	11.8
Malawi	45.7	50.1	4.2	47	48.7	4.3	41.2	54.2	4.6	25.2	64.9	9.9
Mozambique	41.4	53.7	4.9	44.3	50.5	5.2	40.2	54.7	5.1	25.6	68.1	6.3
Nigeria	45.4	50.7	3.9	45.4	50.2	4.4	39.2	55.3	5.5	24.4	65.1	10.5
Pakistan	43.9	49.8	6.3	44.1	51.2	4.7	34.2	59.1	6.7	22.5	65.8	11.7
Uganda	46.6	49.1	4.3	48.4	47.5	4.1	42.9	53.7	3.4	25	66.1	8.9
Tanzania	45.9	50.2	3.9	46.3	49.6	4.1	39	56.2	4.8	24.3	64.6	11.1
Yemen	43	51.9	5.1	48.3	47.7	4	40.4	55.9	3.7	24	66.8	9.2
Zambia	45.2	50.8	4	47.9	48.3	3.8	38.8	57.3	3.9	24.1	64.3	11.6

(i) Estimates are based on adjusted census figures.

(ii) Projections are based on the 'medium' fertility assumption (an average of high and low fertility changes).

According to UN (1995: 143) the 'medium' fertility assumption has well preditced the path of population growth in the past.

Table 2Percentage Distribution of Population by Age Group, Selected Countries, 1960, 1990, 2020, 2050.

	Estimates (i)						Projections (ii)					
Country	1960			1990			2020			2050		
Mid. Income	0 - < 15	15- <60	60 - >	0 - < 15	15- <60	60 - >	0 - < 15	15- <60	60 - >	0 - < 15	15- <60	60 - >
Angola	41.8	53.4	4.8	47.1	48.1	4.8	42.6	52.8	4.6	26.3	65.2	8.5
Algeria	43.7	50.4	5.9	41.9	52.6	5.5	25.3	65.9	8.8	20	59.2	20.8
Argentina	30.8	60.4	8.8	30.6	56.5	12.9	23.2	60.7	16.1	19.7	56.8	23.5
Bolivia	42.8	51.7	5.5	41.2	53	5.8	31.1	60.8	8.1	21.8	61.8	16.4
Botswana	47.4	47.8	4.8	45	51.4	3.6	32.8	60.2	7	22.6	61.6	15.8
Brazil	43.6	51.6	4.8	34.4	58.4	7.2	23.4	63	13.6	19.4	57	23.6
Chile	39	53.5	7.5	30.1	60.9	9	23	61.5	15.5	19.9	56.9	23.2
El Salvador	45.5	50.2	4.3	43.5	50.7	5.8	29.7	63.1	7.2	21.2	60.9	17.9
Iran	44.8	48.9	6.3	45	49.4	5.6	31.6	61	7.4	21.6	60.9	17.5
Malaysia	45.3	49.4	5.3	38.2	56	5.8	27.7	61.5	10.8	19.8	59.1	21.1
Mexico	45	48.3	6.7	38.1	56.1	5.8	24.1	64.6	11.3	19.6	57	23.4
Peru	43.3	51.1	5.6	37.8	56.3	5.9	25.7	63.3	11	19.9	58.2	21.9
Philippines	44.7	50.4	4.9	39.7	55.2	5.1	26.8	63.7	9.5	20.6	66.1	13.3
Poland	33.4	57.2	9.4	24.8	60.3	14.9	20.4	58.5	21.1	19.4	55.4	25.2
Rep. of Korea	41.9	52.8	5.3	25.9	66.4	7.7	19.2	62.8	18	18.5	55.3	26.2
Russia	30	60.7	9.3	23	61	16	17.2	59.9	22.9	17.9	52.4	29.7
South Africa	40.9	53	6.1	38.3	55.2	6.5	29.9	61	9.1	22	61.3	16.7
Syria	44.4	49.8	5.8	48.1	47.5	4.4	36.8	58.3	4.9	23.4	63.4	13.2
Thailand	44.7	50.8	4.5	31.8	61.5	6.7	22.2	63.9	13.9	19.4	55.8	24.8
Turkey	41.3	52.2	6.5	34.7	58.2	7.1	23.5	64.5	12	19.5	58.6	21.9
High Income												
Australia	30.1	57.7	12.2	21.9	62.6	15.5	19.7	62.1	18.2	18.3	53.5	28.2
France	26.4	56.8	16.8	20.3	60.6	19.1	17.2	56.7	26.1	17.6	52.1	30.3
Germany	21.2	61.5	17.3	16.1	63.5	20.4	12.9	58.8	28.3	14.2	48.6	37.2
Italy	24.8	61.6	13.6	16.7	63.1	20.2	12.1	57.6	30.3	13.1	46.6	40.3
Japan	30.2	60.9	8.9	18.4	64.2	17.4	14.2	54.8	31	15.7	48.5	35.8
Sweden	22	60.7	17.3	18	59.2	22.8	18.1	55.4	26.5	18	54.1	27.9
UK	23.2	59.9	16.9	19	60.3	20.7	17.8	58.2	24	18.1	53.5	28.4
US	31.1	55.7	13.2	21.7	61.5	16.8	19.8	57.7	22.5	18.8	54.7	26.5

(i), (ii) see previous page.

Source: UN (1995) World Population Prospects: the 1994 Revision, N.Y.: UN.

Whether or not these changes are going to increase the burden on the working age population in developing countries is a moot point and in part depends on the rise in productivity and in part on the contribution of the young and the old to the economy. It is reasonable to assume that the old are in a better position to continue contributing to the economy through delayed retirement, and paying for part of the cost of maintaining themselves by using their accumulated assets. Decline in the share of the young would also reduce the demand for educational facilities and other social overhead capital catering for the young. This would allow more investment funds to be available for the growing labour force. That in turn would raise labour productivity on the condition that the growth of investment funds is larger than that of the labour force. In short, part of the answer to an ageing population is to focus attention on the production side of the economy.

2.2 The Alternative Paradigms and Ageing: Production, Productivity and Growth

The search for an alternative approach is not meant to negate all that the orthodox economics has to offer on the subject. The search is rather one of broadening the debate, and more fundamentally to challenge some basic assumptions of the orthodox economics.

The alternative paradigms - Marxian, Keynesian and its post-Keynesian variants - do share two important features that are useful for the economic analysis of ageing. They do not assume economic equilibrium and full employment as the rule, but exceptions. They regard economic disequilibrium as a defining and structural feature of an uncoordinated capitalist economy. State intervention and co-ordination are essential if the imbalances in the economy are to be corrected. Secondly, institutions (whether economic or social) play an important role in organising production, consumption and distribution at both macro and micro levels.

The aged in this context are no more a burden on the working population than are the unemployed. The 'old' are then as much a structural feature of a capitalist economy as are the unemployed - capitalism creates a reserve army to regulate and manage the labour market and the institution of 'old' age could contribute to the reserve army. In countries where the cost of pensions are only partially borne by firms, employers have socialised the ageing of their expensive older generation work force through early retirement, and employment of younger and cheaper labour.

A strict and narrow interpretation of this model of 'structural dependency' and its applicability to a country requires the predominance of both wage employment and formal support system for the elderly in the economy. In countries where a large proportion of the labour force is in wage employment and the formal support system is comprehensive we can talk of a 'reserve army' function of the elderly and their 'structured dependency, ... in which the incomes of the retired are too low to prevent hardship.' (Jackson, 1994, p. 35). The incidence of wage labour varies greatly among developing countries, and between sectors within these countries. In general the poorer the country the lower the share of wage labour in total employment, with the agricultural sector having the lowest share: 3.6% in low, 25.6% in middle and 38.2 in high income countries. As for the coverage of the formal pension schemes world-wide only 30 percent of workers and 30 percent of the elderly are covered by such arrangements, most of whom are in developed countries. The rest of the elderly are looked after under variety of informal arrangements. (World Bank, 1994) This pattern of employment and formal coverage requires a looser interpretation of the reserve army function of the old and their 'structural dependence.

Table 3 Percentage of Wage Employment in Each Sector by Country Income Group

Sector	Country Income Group Low	Middle	High
Agriculture	3.6	25.6	38.2
Industry	29.8	76.7	89.1
Services	46.4	68.2	85.6
All Sectors	17.2	57.4	84.4

Source: World Bank (1995) World Development Report 1995, table 11.2, p.72.

Capital has adapted very well to the developing country setting by drawing on a ready 'reserve army' in rural areas and in the informal sector in urban areas. This 'reserve army' has long been acknowledged though in different names such as 'surplus labour,' and 'disguised unemployment.' It has also been formalised in theoretical models the most celebrated one being that of Lewis (1954). Age has not been an explicit characteristic of reserve army in LDC, since high birth rate has ensured that capital could draw upon a young and growing work force. Migration and transfer of labour have been the main mechanisms of utilising this reserve army. Early writing on disguised unemployment and surplus labour talked of zero cost of labour transfer (marginal productivity of labour being zero) while later writings emphasised the need for the reorganisation of productive activity if the labour transfer were not to have a negative effect on the output. Under the assumption that younger men would migrate first, women (young and old) and the older men, who were already active, were supposed to take up the slack. This increased burden on those remaining behind could result in better living standards for them if the agricultural output would remain constant and if the household income would be supplemented by remittances. The elderly would not necessarily become 'structurally dependent' since they neither retire from active work nor do their share of income from household output and income would decline simply on the account of migrating members. They might even increase their power and influence in the household.

Migration, however, would gradually change the character of household co-operation as wives reunite with their partners in urban areas. If this were not to be followed by further re-organisation of work which could be impossible because of the older age structure of household, the result would be a labour shortage and a decline in output. It should also be noted that households do not start with similar endowments of productive factors, particularly land and labour. Consequently, migration will have a differentiated effect on households. For example, those with larger families, better quality land and the resources to hire in labour can enhance their position even in the absence of their younger members, while others would have to eke out a meagre living from the farm, and increasingly have to rely ever more on remittances.

'Structured dependency' of the elderly gradually emerges among the poorer households. A 'structured dependency' which is not necessarily based on retirement (like in developed countries) but on access to resources to generate a reasonable income to prevent hardship and poverty. Like in developed countries the elderly in LDCs are not the only 'dependent' group on the working population. The unemployed and underemployed population are part of this 'dependent' group whose number in medium to long run is influenced by demographic factors. But equally, if not more important than demographic factors and with a far more rapid effect on the number of unemployed and under-employed are factors like the level of investment, capacity utilisation and general level of economic activity.

This method of analysing ageing is not only more realistic but also more fruitful in terms of its policy implications. The welfare of the elderly is not marginalised to a branch of social policy or to an item on government budget but integrated in the broader economic policy discussion. Although population ageing creates an identifiable budget constraint where pension schemes exists, it would not create a real resource constraint, but a 'financial constraint created by a decision to record and balance a particular budget.' (Jackson, 1994, p. 39) Broadening the discussion of 'dependency' locates the debate on ageing of population in the general debate on economic growth, since in the final analysis it is the <u>growth and level of output and its fair distribution</u> that will protect the elderly.

2.3 Gender Relations and Ageing

'Gender relations are social relations referring to the ways in which the social categories of men and women, male and female, relate over whole range of social organisation, not just to interaction between individual men and women in the sphere of personal relationships, or in terms of biological reproduction.' (Pearson, 1992: 292) Such relations permeate 'all aspects of social activity, including access to resources for production, rewards or remuneration for work, distribution of consumption, income or goods, exercise of authority and power, ...' (Ibid.)

Ageing, whether of an individual or of population, is not gender neutral. Women carry the main burden of reproduction of labour within the household and also perform caring (physical and emotional) functions. As the number of elderly rises in the population, so does the burden on women. This affects women of all ages, and the impact is more severe in societies with little formal support system for the old.

Neither are the economic implications of population ageing gender neutral. In general ageing has more negative implications for the economic situation of women than men. The reasons are based on deep-seated gender inequalities in ownership of assets, employment history, and control over family income and assets. Besides, demographic factors (like the longer life expectancy of women than men) and social factors (like the age difference at marriage, and higher remarriage rate - after death of spouse or divorce - for men than women) lead to a precarious living condition for older women. In sum, over their life time women's entitlement to goods and services is heavily affected by gender relations.

On average women earn less than men in most countries (UN, 1989) and have a shorter and more irregular labour force participation because of their child rearing and caring functions in the family. A large number of women work in the informal sector where formal pensions are non-existent. The incidence of part time employment and early retirement are also high among women. (World Bank, 1994)

Women's weak economic position reflects their 'secondary status' in the labour market, who not only earn less than men for doing similar or comparable jobs, but also form a 'reserve army' of labour who can be dismissed and re-employed depending on the economic fortunes of the firm. (Elson and Pearson, 1984) The latter, in turn, would lead to further interruption in the employment history of women. It is important to note that 'this secondary status arising from women's subordination as a gender means that women are particularly vulnerable to super-exploitation, in the sense that *their wages may not cover the full money costs of the reproduction of their labour-power, either on a daily or generational basis*.' (Ibid. p. 29, my emphasis).

Over time gender biased property and inheritance rights could further weaken women's economic position. Land tenure systems that grant women use rights rather than outright ownership rights severely undermine women's position in cases of disputes, family break ups, and death of the owner of the land. Even where gender equality in ownership rights does exist, as is the case in countries where Islamic jurisprudence is the foundation of the civil code (e.g. Iran and Saudi Arabia), inheritance rights could prejudice women who, under the law, are entitled to only half the share of their male siblings. Such inheritance systems concentrate ownership over time in the hands of men. Changes in the land tenure system, like land reforms, while just in principle, could work against women, if the land reform law only grants property rights to men and thus effectively taking away what right women had to land prior to the reform. In Colombia the land reform law restricted land redistribution to married males over 18, depriving women of rights they had before the reform. (Whitehead, 1985)

The above discussion clearly demonstrates that most women enter the old age in a much weaker economic position than men. They have accumulated fewer financial reserves than men, have very little assets and their control over the family asset quite often weakens with the death of the spouse. Consequently poverty is a real threat to women as they get old. The empirical evidence, limited as it is, reveals widespread poverty among older women in both developing and developed countries. 'In Urban China, 41% of old women have annual incomes below an extreme poverty line (70% of normal poverty line), compared with 4% of old men. In Venezuela, women account for two-thirds of old people in the lower income decile.' (World Bank, 1994)

This is an experience that has been shared by women in the developed countries. In 1899 a study of poverty in the UK found that 60% of women over 65 years of age had incomes less than 10 shillings a week, the comparable figure for men was 40%. Old age female poverty in developed countries is not confined to a distant past. A US study revealed that one in three of single women over 65 years of age lived in poverty in 1986, twice the head count poverty rate for the rest of the population. In Australia, where access to public pensions is based on the individual's level of income and assets more women (85%) qualify for pensions than men (65%). (World Bank, 1994.)

The gender implications of ageing go far beyond the weak economic position of older women. In most societies the longer life expectancy of women has hardly been a factor in treating female ageing as a special case, and therefore in need of special attention. For example, high female illiteracy means widows are going to be seriously disadvantaged after the death of their literate spouse. Migration of younger members of the household deprives the parents of a vital source of support in old age, but it is the longer living mother who has to cope, for a longer period, in the absence of her children.

An Indian study by J. Pathak points to the urgent need for research into the health problems of elderly women, that range from the psychological problems arising form equating the menopause with the onset of terminal ageing, various gynaecological problems, to incidence of eye disease associated with earlier malnutrition where traditionally men eat first or choose better cuts. The same study revealed that a lower proportion of women over 60 (30%) seek hospital treatment than men of the same age group (60%), that is in contrast to the correct epidemiological proportions. (Tout, 1989)

The epidemic spread of Aids in some countries is also going to add to the problems of the elderly women, who come under increasing pressure to care for their sick and dying children. The loss of household members who are of working age will compound the problems for the elderly women who are not only being deprived of a source of support, but now have to take care of their grand children.

The fact that older women do have special needs requiring targeted policies should not detract us from the other fact that some of the most basic needs of older women are the same as the rest of the community - needs such as adequate shelter, adequate nutrition, clean water, etc. that should be addressed at a more general level. It has been suggested that where programmes are developed for the older women, they should be structured in such a way that the benefit would go to the whole community, that in turn would strengthen the community and its role in caring for the elderly.

3. Economic Policies to Manage Population Ageing

Economic policies for management of an ageing population have been driven by the social policies designed to care for the elderly. The literature identifies four main models of social policy and welfare delivery - residual, institutional, occupation-based and structural. The main difference between these models is the level of state intervention. At one end of the spectrum is the residual model in which basic means-tested benefits combined with remedial services would be made available to those in need. At the other end of the spectrum the state undertakes to provide a comprehensive service to all who require it. (Phillips, 1992)

In parallel to the above there also exists the all important informal -household based-provisioning of care for the elderly. Family support systems generally make the least demand on state finances, and it is not surprising to find that in the debate on the role of state the orthodox economic policies have increasingly looked to the family to fill the gaps wherever the state reduces its role in the provision of services including the care of the elderly.

The household support system varies greatly among countries and it plays a far more important role in developing than developed countries by providing social and caring services to its members including the elderly. It is often argued that the extended family by pooling the work opportunities, income and risk of its members solves the information problems of a formal system. (World Bank, 1994) The usefulness and importance of the informal systems in the provision of social care should not, however, be exaggerated and glorified. Informal systems of this kind impose a high cost on the female members of the household who are the care providers. More importantly, informal systems cannot cope with the rapid pace of change emanating from industrialisation, urbanisation, migration, secular education, developments that have been associated with capitalist and centralised socialist developments, and have often been referred to as 'modernisation'.

According to the World Bank's (1994) assessment such changes call into question the role of traditional norms, lower the prestige of the elderly and diminish the effectiveness of the extended family system. That in turn leads the World Bank (1994) to the conclusion that 'mandatory formal programs [such as pension and social security contributions] can hasten this process', and that 'governments should carefully assess when, where, and in what form to introduce formal programs of old age support. They should use measures to maintain rather than crowd out informal systems that may still be functioning reasonably well.' (p. 49) Such an approach is in line with the orthodox economic policies of reforming the social security system by transferring the collective responsibility of the state, financed through taxation and other state revenues, onto the family.

Such transfers of responsibility do not usually take account of the burden that will be imposed on the household, in particular the poor and lower middle class households with little assets and ability to cope with the increased pressure of having to care for their elderly. The World Bank is also incorrect in assuming that 'modernisation' will necessarily reduce the control of the elderly over resources. The institution of private property does not change with 'modernisation' and it is this institution that lies at the heart of the control of resources. The asset rich members and groups in the society usually accumulate and benefit from the 'modernisation' process. They therefore age with increased power and resources.

The dynamics of ageing and fertility decisions should be another area of concern in policy discussions of 'who should care for the old?' The logic of household care suggests that households would reproduce themselves so that the generational balance (in terms of the dependency ratio within the household) is maintained over time. The lower the productivity of the members of the household and the smaller the asset base of the household, more of them are required to contribute to the pool of resources needed to maintain and improve the standard of living of the household. In this context the old age security motive for having children may well have an important bearing on fertility decisions and family size.

There is a well established literature on the old-age security incentive and family size (see ,e.g., de Vos, 1985, Vlassoff and Vlassoff, 1980, Entwise and Winegarden, 1984) The setting of the relationship is a 'traditional' society in which 'social norms ... support parental claims for care in old age... The perceived cost of having many children is either non-existent or made worthwhile by the expected benefits. A relationship between old-age support expectations and desired family size is common to "traditional" societies, irrespective of cultural or historical background.' (de Vos, 1985: 793) Whether we agree with the taxonomy of 'modern' and 'traditional', the transfer of resources from one generation to the next within the household underpins the responsibilities of the younger to the older generation. The control of the elders over household property ensures that the younger generation fulfils its responsibilities. Besides such reciprocal arrangements that may not necessarily be dependent on family size, in general old age care is more secure with a larger number of children; this is neatly summed up by a Scandinavian proverb that 'one mother can care for ten children, but ten children cannot care for one mother'![8] The evidence from Taiwan and Philippines suggests that 'after controlling for demographic, socio-economic, and family characteristics, the distinction between expecting to rely a "great deal" rather than "only a little" on children was found to have an effect on preferred fertility in both countries. ...This effect is strongest with respect to higher-parity children, especially the desire for a fourth child. Women who expect to rely on children a great deal are twice as likely to want a fourth child in the Philippines; three times as likely in Taiwan.' (de Vos, 1985: 805)

The policy implication of the above discussion is that the introduction of pension schemes will reduce the demand for children and hence fertility rate will decline. This may sound too mechanistic particularly if we note that the provision of state-sponsored pension schemes in many industrially developed countries came in the wake of a sustained decline in marital fertility, while at the same time other factors such as laws against child labour and compulsory formal schooling reduced the financial benefits of children to parents. More importantly from the point of view of old age care, decline in infant and child morality, and the increased life expectancy, reduced the need for large families as an insurance against old age. (Kelly, et al. 1976, Seccombe, 1993.)

Neither is the debate closed in developing countries where Entwise and Winegarden (1984) in their empirical study of the relationship between pension and fertility have found that relationship operates in both directions. Whatever the direction of causation, in countries where fertility is declining, the state sponsored pension schemes could in part be self financing as the expenditure on the young will decline.

3.1 Poverty, Entitlement and Ageing

Strategies designed to ensure the entitlement of the elderly to a reasonable standard of living are not fundamentally different from those designed for other dependent sections of the population. The key policy issue is not only how to tackle the welfare needs of the present elderly generation, but how to help the future generation of the elderly, who are potentially more numerous, to maintain their standard of living.

The question of 'entitlement' of the elderly to a 'reasonable standard of living' is related to their endowments of assets (physical or financial) and labour power, or some form of social arrangement (formal or informal).[9] Endowments could enable the elderly to either directly produce some of the goods they consume or have access to goods through exchange of their labour, output, or assets. However, endowments on their own do not guarantee command over goods since for example farming one's own land requires labour and other complementary inputs, or the process of exchange brings the question of relative prices and in general market conditions into the picture. In formal arrangements like retirement pension what matters is its purchasing power over time. In growing old people could become vulnerable in the sense of being at risk of losing their entitlement to goods and services. Their assets (e.g. land) may not be productive anymore because of their not having access to complementary inputs like labour that in turn could be due to becoming infirm or migration of the younger members of the household. Another source of vulnerability is inflation for those who rely on formal arrangements like a pension.

It is important to note that there are strong tendencies for the elderly to be 'structurally' poor once they have been thrown into a situation of 'conjunctural' poverty as a consequence of, for example, floods. This categorisation is based on Iliffe (1987) for whom the *structural* *poverty* is the long term poverty of individuals due to their personal or social circumstances, and the *conjunctural poverty* is the temporary poverty into which ordinarily self-sufficient people may be thrown by crisis.' (p.4) It is instructive to draw on historical accounts of poverty and locate the position of the poor in it. In pre-colonial Africa structural poverty was mainly due to lack of access to labour. *The structural poor were the disabled, the elderly and the very young, who could not draw on family resources to make a living.* Landlessness as a cause of structural poverty came later, slowly but surely. (Ibid.)In colonial Africa it was limited to certain areas of ruthless alianation or unusual population density. However, the landless were spared from extreme poverty if they could sell their labour. This possibility was gradually narrowed down with the rise in population and slow growth of demand for labour coupled with lack of access to land and other resources. The unemployed joined the ranks of the disabled and the old.

It is important to emphasise the fact that the elderly are a differentiated population in terms of their ownership of assets and sources of income, that in turn determine the degree of their vulnerability. The first question is then 'what determines the income of the old?' The elderly's income could be based on any combination of the following: ownership of assets (physical or financial), own work, social security, a pension, marital status, other family members, etc. Available data on sources of income of elderly in selected number of developed and developing countries show that in general the richer the country the higher the percentage of those above the age of 60 relying on pensions/welfare for their livelihood. In low income countries, except in urban areas of China, family and own work are the main sources of income. The data also suggests that as countries get richer formal system gains importance in providing support to the elderly (table 4). Empirical evidence also shows that 'the extent of intergenerational support is often dependent upon socio-economic status; the lower the status, the greater the degree of interdependence.' (see sources quoted in K. Sen, 1994, p. 30).

However, even in some of the richest countries own work is a source of income over and above the universal pension/welfare income, either because the pensions are too low and/or people continue to work and draw on the formal pension system once they have reached the qualifying age.

The issue of maintaining the purchasing power of elderly's income in the first instance is a question of price inflation. The consumer price index (CPI) provides an adequate indicator of the purchasing power of the elderly so long as it includes the basket of goods and services consumed by the old. In countries where pensions are indexed to inflation, the degree of indexation and the time lag of adjustment are also of particular interest to pensioners. Full and regular adjustment of nominal value of a pension to inflation are the logical policy conclusion. Employment opportunities for the elderly should be another important area of concern though the pressure of youth and middle-aged unemployment has always been used to justify early retirement of older workers. Moreover, the structural adjustment programmes include policies to reduce government budget deficit that, more often than not, lead to direct cuts in state employment. The older workers are again one of the first groups to be considered for retrenchment, who would have very little chance of finding jobs outside the state sector, except those whose skills are in short supply. A policy of retraining the older workers should then be put on the agenda of retrenchment. Such a policy will increase the chance of their employment in the private sector and reduce the number of social security claims.

As far as the family source of income is concerned there are no hard and fast rules, except the general principle of supporting the economic base of the informal system of care for the elderly. (World Bank, 1994) At macro level, for example, supporting the agricultural sector and in general the rural economy, home to a great majority of the elderly, is of particular relevance. Another area of intervention is communication between rural and urban areas. Rural to urban migration of the younger people could weaken the link between the two generations within families, and increase the uncertainty for the elderly who rely on remittances. Improving the flow of information and communication between the two areas and offering incentives for remittances could help to maintain the economic and social links between the two areas.

At micro level, the general principle is to ensure that government programmes designed to provide goods and services to the elderly complement rather than substitute for those provided by families and other voluntary sources of support. (World Bank, 1994) Some measures adopted in DCs and LDCs include: (i) housing assistance, (ii) supportive services for care-givers, (iii) financial assistance and (iv) targeting of social assistance programmes to people without adequate income or families capable of supporting them. These are just general guidelines and countries have to design their policies on the basis of their informal tradition of support and their administrative capacity for supporting the informal system.

Complementarity between formal and informal systems in the era of structural adjustment also means that adjustment policies should ensure that the income of families caring for the elderly is protected when it comes to charging of fees and cuts in public services. Since the late 1980s adjustment programmes have become sensitive to the needs of the elderly by treating them as part of the vulnerable groups in the society, and hence the object of targeted policies, such as exemptions from user charges. (Cornia, et al, 1987) However, such policies should go further and offer practical help for maintaining the informal system of care. For example, cuts in health services usually entails early discharge from hospital. Elderly patients could be treated differently either by being hospitalised longer than others, or their families could be offered compensation and support after an early discharge.

3.2 Pension Policies: A Critical Overview of the World Bank Proposals

So far we have touched on several macroeconomic issues that are important for the entitlement of the elderly. Issues such as the relationship between relative prices and pensions. But the most important macro question in most LDCs is the establishment of a formal system of pension and social security for the old, and where such a system exist the key policy question is how to ensure its financial viability.. The World Bank (1994) in recent document on the subject - *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth* - provides a good overview of various aspects of the debate.

The starting point for the World Bank is how to reconcile the needs of an ageing population with the objective of economic growth in economies where the combination of declining

Table 4 Sources of Income in Old Age, Selected Countries, 1980s.

Percentage of persons ***over 65*** *receiving income from:*

High-income countries	Work	Family	Pension/	Welfare
Savings				
Australia	9	----	93	----
Canada	19	----	97	----
France	4	----	96	----
Germany	2	----	98	----
Netherlands	5	----	100	----
Sweden	0	----	100	----
United Kingdom	13	----	100	----
United States	20	----	94	----
Average	9	----	97	----

Percentage of persons ***over 60*** *receiving income from:*

Middle-income countries	Work	Family	Pension/	welfare
Savings				
Argentina	26	8	74	6
Bulgaria	28	5	99	----
Chile	20	9	73	----
Costa Rica	21	23	46	----
Hungry	47	40	99	----
Budapest	34	21	100	----
Villages	58	54	99	----
Rep. of Korea	24	64	6	8
Singapore	18	85	16	37
Trinidad and Tobago	15	26	77	----
Average	25	32	61	17
Low-income countries				
China	45	34	13	----
Urban	15	17	64	----
Rural	51	38	5	----
Indonesia	46	63	10	4
Kenya	----	88	----	----
Nigeria	----	95	----	----
Philippines	63	45	13	2
Average	47	58	13	6

Notes: ---- Not Available. Averages are unweighted.

Source: World Bank (1994).

fertility and broader diffusion of medical knowledge has led to a fast ageing population. It is the social security and health expenditure implications of this ageing process that underlie and inform the World Bank approach to the management of an ageing population.

The World Bank (1994) views the problem as follow. With ageing there will be a growing demand for old age health care and pension spending putting pressure on public expenditure if the state could not increase the necessary revenue or reduce other expenditure. The current state run pension schemes also do not give much of a protection to the aged as in general they are not fully indexed to inflation. Such schemes also do not have much of a redistributive role from life time rich to life time poor, because the rich live longer and therefore collect benefits over a longer period than the poor. The poor would also loose out as pension spending would crowd out important spending on public goods and services. Governments often use pay roll tax to pay for their pension scheme; such taxes distort the labour market, thus reducing the demand for and the supply of labour, adversely affecting national output. In the final analysis it is the current output of the economy that pays for the consumption of the young and the old alike. The solution to the problem of ageing is to devise pension policies that will make the national pie bigger providing more for everybody, hence the twin objectives of protecting the old and promoting growth. (Ibid., pp. 2-3)

Several reasonable conclusions emerge from the World Bank overview: that the support of the elderly is easier in a growing economy, that the real value of pensions should be maintained by indexing them to inflation, that the state should do a better job of running pension funds and that access to public funds should be restricted to the poorer pensioners. Having said that, it should be borne in mind that the World Bank general observations and comments are in the context of an analytical position in which the state should play a subordinate role to the market, and what has been done or can be done without the state is preferable to state interventions. For example, family care and private pension arrangements are encouraged by the World Bank. However, the World Bank acknowledges that individual voluntary action may not result in adequate provision for old age given the inadequacies and shortcomings of capital and insurance markets and given the need for the protection of the poor. The following policy questions are then posed.

Should the system be voluntary or compulsory, and at what level? What should be the relative emphasis on savings versus redistribution? And should these functions be combined or provided through separate financing and managerial arrangements? Who should bear the risk of unexpected outcomes - pensioners or others in society? Should the system be fully funded (current pensions financed by prior savings) or pay-as-you go (current pensions financed by taxes on current workers)? Should the management of the pension funds be centralised or decentralised and competitive? (Ibid., p. 8)

To answer these questions the World Bank considers several alternative financing and managerial arrangements for old age security: 1. Public pay-as-you-go plans; 2. Occupational Plans; 3. Personal saving and annuity plans. The prevalence and relative importance of these plans for old age security have depended in part on the state taking an active role in the provision of pensions (in 1889 the world's first national contributory pension scheme was introduced in Prussia under Chancellor Bismarck) and in part on the development of financial sector and initiative of the private sector. In the current debate on ageing, the World Bank evaluates these different plans on the basis of their being instruments of growth and as a social safety net and on the basis of their fulfilling the functions of savings, redistribution, and insurance. In the World Bank's view no single plan can simultaneously fulfil these functions and meet the objectives of growth and social safety net.

But let us first consider the merits of the most common scheme: a publicly managed scheme that pays an earning-related defined benefit (the contribution determines the benefit received which has a minimum level) and is financed out of pay roll taxes on pay-as-you-go basis. As for the redistributive function, the high income people contribute more to the scheme and part of their contribution could be set aside and transferred to the poor. Such a redistribution could help the social cohesion in the country. The savings function is also fulfilled because of encouraging high wage earners, who also draw more on retirement, to participate in the scheme. The political acceptability of the system rests on the low administrative costs of running the scheme because of the economies of scale and scope. It is suggested that such schemes have reduced old age poverty in industrial countries in the post-World War II era.

Having said that the budgetary implications of a publicly managed scheme have concerned policy makers. A country with a young population pays more into the system than it draws, but as the country ages a higher level of contribution is needed to maintain the benefit payments. At the same time an earning related benefit means that the richer workers and contributors take more out of the system on retirement. In other words the income differences within a generation will continue with ageing. If the high contribution is seen as a tax by the richer workers, who may not see the link between their contribution and services received they might resort to tax evasion that in turn leads to underfeeding of the scheme. Such schemes could also encourage withdrawal into the informal sector, causing difficulty for the broader economy. Employment could also be affected if employers cannot pass the pay roll tax to their workers, or to prices. (World Bank, 1994)

Whilst some of the criticisms against a public pension system have been borne out by empirical evidence (e.g. the absence of intra-generational redistribution), others like tax evasion, etc. are more speculative. Yet, it has to be concluded that public pension schemes are in need of reforms and countries developing the public pillar of their old age social security infrastructure should avoid some known pitfalls like high administrative costs of running the system.

Other single pillar systems are also not without their problems. Publicly managed provident funds (fully funded with defined contribution pension schemes) have in some countries led to misuse by the government, as these funds have often been required to invest solely in public securities with low returns. Such funds may also not be accessible by the private sector, reducing the investment and developmental potentials of such funds. As far as the redistributive function is concerned such schemes fail as they do not have any provisions for redistribution to low income workers. (Ibid.)

The privately managed occupational and personal savings plan also fail as a single pillar. They do not fulfil the redistributive function (they are not run along social objectives, but employer's objective). The protection they offer is limited, in the main, to those in the labour market and those staying with one employer. In cases where such schemes are not fully funded they are also prone to employer or insurance company default. Furthermore, they do not address the problems of information gaps and poverty of those on low life time income, whose property will be accentuated by old age. The privately managed savings accounts and similar schemes make a positive contribution to the capital market, but cannot protect the investors against poor individual choices and economy wide recession. (Ibid.)

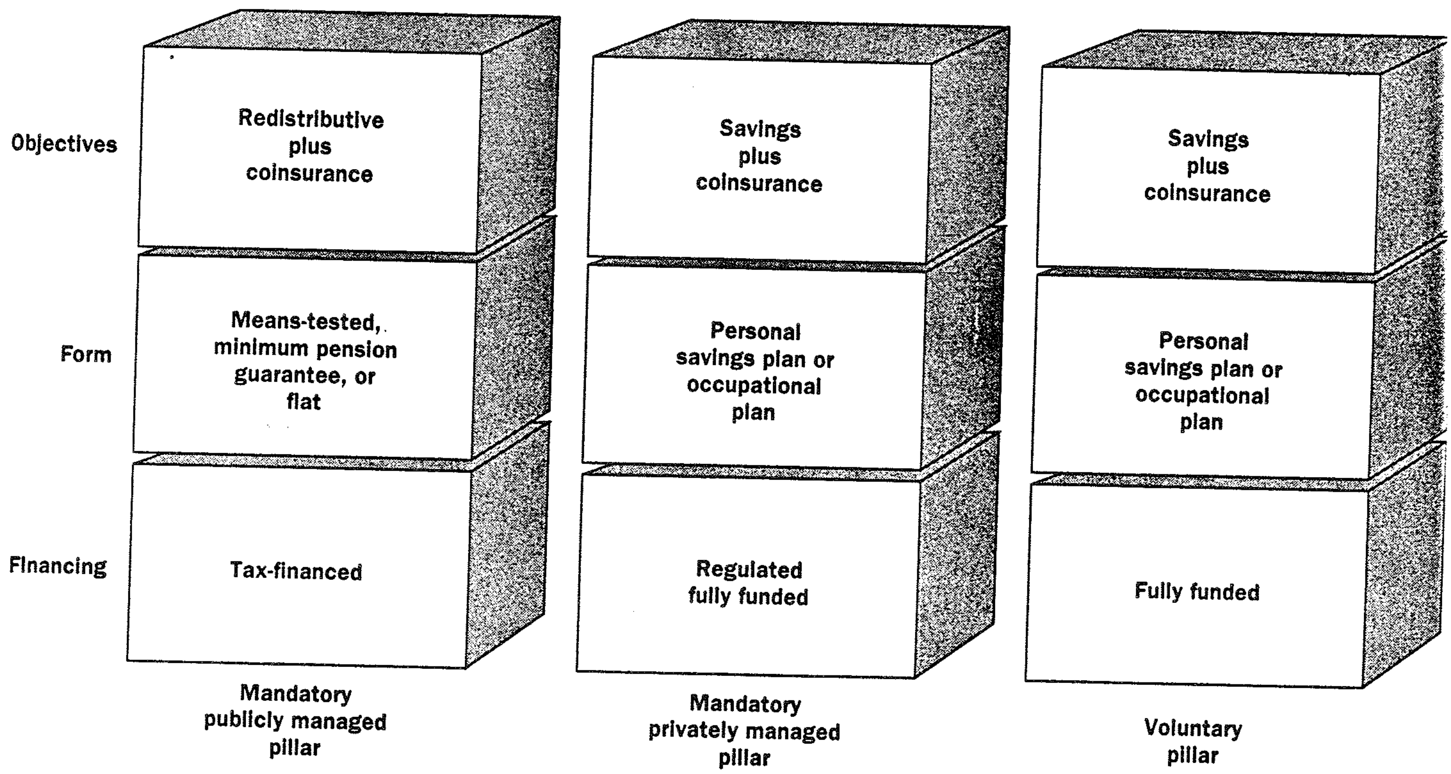
Given the shortcomings of these schemes, it should be clear that no single scheme can be an instrument of growth and social safety net, nor can a single scheme fulfil the functions of savings, redistribution and insurance against recession and poor investment judgement. The World Bank recommends a multipillar system in which these various functions are delegated to different pillars.

Accordingly, there should be two mandatory pillars and one voluntary pillar. One of the mandatory pillars should be tax financed and publicly managed and while the other should be fully funded and privately managed. The voluntary pillar is a top up scheme that is fully funded and is for those who want additional protection and insurance. Figure 1 provides a snap shot view of these different pillars, their objectives, form that they take, and their financing arrangement.

The public pillar, as a social safety net, performs the poverty alleviation and redistributive functions. It would be financed through taxation and would pay old age benefits shortly after coming into operation. It would also redistribute income towards the poorer elderly.

The second pillar is a mandatory fully funded and privately managed scheme that fulfils the savings function. It links benefits actuarially to costs. It is based on the argument that people

Figure 1 The Pillars of Old Age Income Security



Source: World Bank (1994), p. 15.

save when they are young and working and dissave when they are old and not working. In other word savings ensure that income and consumption are spread evenly over the life time of an individual. The second pillar is also expected to contribute to capital accumulation and the development of capital market, thus contributing to growth. To operationalise the second pillar people could either keep personal saving accounts or join occupational pension plans. The third pillar is a voluntary occupational or personal saving plan that provides additional protection to those who want more income and insurance in their old age.

It is important to note that redistribution and saving functions are separated in the above multi-pillar system. The first pillar is assigned the redistributive role whilst the second and third are given the saving role. All the pillars have an insurance function, which is further enhanced by the virtue of diversification of risks within the whole system.

Following the setting up of this multi-pillar system the next policy question is what should be the basis of benefit payments. The choice for the second and third pillars which perform the saving function is straightforward - benefit payments are invariably related to contributions. For the public pillar benefit payments could be either based on earnings before retirement (earnings-related), on the one hand, or offering a universal flat pension (flat benefits) or one based on economic circumstances of the retiree (means-tested benefits), on the other. What makes the matter complicated is in part due to making the system politically acceptable to contributors that their pensions are going to be related to their contributions, whilst maintaining the redistributive and poverty alleviation functions of the scheme. That in turn has implications for the pay-as-you go financing of the scheme - earning-related benefits would result in a high tax for the present generation.

The choice between a flat and a means-tested benefit is also complicated by the financing and institutional arrangements required to administer the system. Flat benefits are easier to administer but more costly to finance than means-tested benefits. The latter, however, is a better vehicle for redistributing benefits to the poor. A compromise could be means-tested benefits with a built-in minimum pension guarantee. This may well prove the best option for countries that have a mandatory saving scheme - everybody gets a minimum pension while means-testing ensures that those with low savings (because of their low wages) qualify for more benefits.

The foregoing discussion clearly demonstrates that there is a need for tailoring the design of pension schemes to the financial and administrative structure of the country. This is particularly important when it comes to establishing privately managed mandatory or voluntary personal saving plans that require a strict regulatory framework. Establishing and maintaining a stable macroeconomic environment (low inflation, budgetary control, effective tax policy and administration, etc.) is also important for the success of the pension schemes, and more importantly for economic growth that underpins any social security system.

Finally, the implementation of the pension plans is conditioned by the existing age structure, level and rate of growth of national income and the resource base of the economy. The World Bank identifies three sets of countries, based on the age structure and fertility rate - (i) young low-income, (ii) young and rapidly ageing and (iii) older economies with large public pillars.

Many African and South Asian countries fall in the 'young and low-income' category. They lack financial markets or regulatory capability necessary for establishing a decentralised funded pillar. For these countries the World Bank recommends a (a) small public pillar (covering urban areas - where the informal support system breaks down first - and big enterprises in order to keep the cost of operating the system low) and (b) direct support to the poor, including the old poor who are vulnerable because of their diminished ability to work. Governments should also try to maintain the informal support system by providing incentives for the families to continue taking care of their elderly. Other set of policies involve the establishment of legal and institutional framework for the development of personal saving and occupational plans. (For more details see World Bank, 1994, pp. 19-22.)

The 'young and rapidly ageing' countries cover fast growing East Asian countries where fertility rates are falling rapidly. Here the World Bank calls for the establishment of a mandatory decentralised funded pillar, provided that governments have the regulatory capability, and that a banking and financial infrastructures. In line with the World Bank overall multi-pillar scheme the public pillar is given a redistributive role in these countries.

The 'older economies with large public pillars' cover OECD, Eastern European and some Latin American countries that have large middle-aged population and are ageing rapidly and have a large public pillar. The World Bank approach for these countries is one of reforming the public pillar to reduce the pressure on the public pension funds by raising retirement age, eliminating rewards for early retirement and penalties for late retirement, reducing the benefit level and making the public pillar more of a safety net and poverty alleviation scheme. Development of other pillars is the other plank of the reform strategy in these countries.

The World Bank intervention in the debate on ageing is comprehensive and fits well with its broader development strategy, which gives the state a subordinate role to the market. The state is expected to play a regulatory role facilitating and enabling the private sector to develop instruments and institutions to manage the financial requirements of an ageing population. The positive contributions of the World Bank report in part stem from its attempt to focus our attention on the poverty aspects of ageing, the redistributive role of pension plans and on the strategic relationship between welfare of the elderly and an economy's long term economic performance.

But on closer examination, we find that the theoretical foundation of the individual pillars are not as strong as they sound. The privately managed pillars for example are designed along the Life Cycle Hypothesis which has a rather weak empirical pedigree, as discussed earlier. All the pillars are supposed to have a built in coinsurance objective, which can only exist in mandatory systems. There can be no voluntary insurance market for the old age because of the positive covariance of risks. [10] You cannot insure for the old age, you can only save.

The redistribution objective is limited to income. Mindful of budgetary implications of public pension funds, the World Bank solution is to restrict pension coverage, as in the case of the 'young low income' countries where only urban areas are to be covered. This is a classic case of 'urban bias' which could lead to rural-urban migration of the elderly, that in turn increases the demand on the pension fund. If until now the younger members of the family were migrating alone, with the introduction of an exclusively urban based pension system there is an incentive scheme for the wholesale migration of the household.

6. Conclusion

With the onset of population ageing the population debate has come full circle. The ageing 'problem,' a consequence of fertility decline, has become the new bête noire of development replacing rapid population growth, a consequence of high fertility. It is ironic that ageing and rapid population growth are the two faces of the same coin: fertility. The terms of the debate are also similar. Both population growth and ageing have an adverse effect on savings, it is argued, as the young and the old are more consumers than producers, and thus dependent on the working population.

This paper has argued that we need to carefully examine the concept of ageing and dependency. Ageing is a culturally, socially and historically determined concept, as well as having a gender dimension. In using retirement age as the official definition of ageing we should take note of the functional age, which is a far more important indicator of the productive ability of people as they age. Moreover, in singling out the aged as dependent the orthodox debate not only ignores the positive contribution that the old could and do make to the economy, but also fails to recognise the fact that there are other sections of the population, such as the unemployed, who are also supported by the working population. From a long term point of view, however, it is the *working age* and not just the *working* population that matters. In this sense the crisis of population ageing is really a crisis of an imbalance between the working age and old population, but even here what matters most is the productivity of the working age population. That in turn focuses the attention on investment and production, areas that were also the concern of early discussions on the economics of ageing. Keynes and others argued that population ageing would reduce growth via its adverse impact on aggregate demand and investment, and not because of a higher tax burden and government expenditure on social security and pension. The relevance of this approach to the current debate on ageing is its integrated view of the demand and supply or consumption and production implications of ageing. This is in contrast to the orthodox approach which is primarily concerned with the consumption effects of ageing.

We approached the issue of consumption needs of the elderly in the broader context of ensuring their 'entitlement' to a 'reasonable standard of living. The question of entitlement is related to the endowment of assets, labour power, and/or some form of social arrangements, be it formal or informal. Endowments and entitlements are not just about consumption - ownership of land in itself does not guarantee access to food if for example the complementary input of labour is not available to till the land, or the land does not have any exchange value. In this case protection of entitlement becomes a production issue. Similarly maintaining the productive ability of people (e.g. through retraining) as they age could be as important as protecting the purchasing power of the elderly in general, that requires price stability.

Individual and population ageing are not gender neutral. Women's entitlement to goods and services over time is closely related to work their history, pension, property and inheritance rights. In general old women have a precarious economic position, as they have accumulated fewer financial reserves than men, have very little assets and more often than not their control over the family assets weakens with the death of the husband. Poverty is a real threat to women as they get older, this is a view supported by empirical evidence. It is therefore imperative that any financial and social scheme developed to care for an ageing population should include targeted policies for the support of the elderly women.

The key conclusion of this paper is that the economic implications of an ageing population are intricately intertwined with the macroeconomic performance of a society over time. At the macro level it is the current output that has to pay for the subsistence of the population, young or old, at working age or retired. The current output, however, depends in part on past savings and investment. In other words the work and savings of the present generation provide subsistence and employment for the present as well as for the future generation. It is this 'umbilical' cord that binds the present to the past and the future.

Without inter-generational co-operation societies cannot regenerate and reproduce themselves. This is not a simple altruistic statement but is based on hard economic logic. If the demographic trend is such that the share of the old in total population is on the increase, the employment and productivity of the working age population (which is also on the increase in almost all developing countries well into the next century) have to increase to meet the needs of the rising number of old people as well as those of the rest of the population. That in turn relies on investment (both physical and social) which is partly financed by past and present savings. The rationale of saving for the old age - one form of which is accumulation of pension funds - is inseparable from the objective of production and productivity increase. This should be the backdrop to individual savings plan and other personal arrangement for the old age.

Notes

1 For an extensive bibliography on various aspects of aging in DCs see Clark, et al., (1978) and Hurd (1990).
2 See Shryock, et al. (1975), pp. 132-134 for a discussion of various demographic definitions of ageing.
3 Ekpenyong, et al. (1986) quoted in Tout (1989), p. 8.
4 For further discussion of these and other points related to historical ageing see Tout (1989) pp. 8-10 and references therein.
5 See for example the seminal article of Cassen (1976) and references therein.
6 See references in Jackson (1992).
7 For further evidence see Mirer (1979) and (1980).
8 Quoted by Cutler, et al. (1990).
9 This is based on Sen (1981).
10 This is based on one of the principals of theory of risk and insurance. The principal is that the cost of an additional risk depends on its covariance with existing risks: the cost will be higher the stronger the degree of positive covariance, whilst negatively correlated risks will have the effect of reducing the total cost of risk bearing. Consequently, there are potential gains from trade in risk when incomes or contingencies are uncorrelated while, if all agents face similar risks, risk cannot be reduced much by trading it between participants. (Platteau, 1991.) There are various examples of this situation: farmers living in an ecologically uniform area and carrying out activities which are similar from a risk point of view, accident risks of drivers of the same age, and in relation to the subject of this paper health risks of people as they age.

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