***DRAFT** (only for discussion)*

LOOKING BEYOND THE CURRENT DEMOGRAPHIC SCENARIO: CHANGING AGE COMPOSITION, AGEING AND GROWING INSECURITY ISSUES FOR THE AGED IN INDIA AND PAKISTAN

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PAPER PREPARED FOR THE 25TH IUSSP INTERNATIONAL POPULATION CONFERENCE

Tours (France)
18-23 July 2005

Abstract

This paper seeks to examine the insecurities faced by the aged in India and Pakistan by linking them with their recent fertility-mortality decline and added longevity. Interactively, these factors are expected to keep both the countries young and old simultaneously – with the former (i.e., the younger age groups) would be looking for quality employment while the latter (i.e., older age groups) may search for a secured and healthy life. Using a set of macro economic and other details from both the countries, this paper argues that their current economic dispensation lacks to conform at both the levels. Job seeking younger adults would likely to face serious employment and labour market issues due to their growing influx in the labor market coupled with decelerating work opportunities, while the older adults are expected to confront with serious insecurity issues owing to their poor past, low health standards and inadequate public support mechanism. All these may add to their vulnerabilities and constrain familial transfers. It may also create a conflict between the public objectives of downsizing the families and the socially desired family size or its composition. This study, therefore, suggests creating mechanisms to ensure the old age security with finances arranged from a mix of public and private sources. It also makes out a case to account for the age structure changes in all new economic formulations of both the countries.

Looking Beyond the Current Demographic Scenario: Changing Age Composition, Ageing and Growing Insecurity Issues for Elderly In India and Pakistan[1]

1. Introduction

This analysis seeks to present an overview of important demographic changes in two major South Asian countries – India and Pakistan[2] - resulting into: (i) speedier fertility reduction, (ii) added life years, and (iii) a bimodal growth in population characterized by simultaneous expansion in the size of their working age adults (especially 25+) and the aged (i.e., 60+). The study strongly postulates that these changes may prove significant to both the countries in many ways – affecting, *inter alia*, the size and clearance mechanism of their labour markets, nature of dependencies, increasing ratios of old to young, etc. The study further postulates that due to the growing phenomenon of jobless growth and emerging labor market issues, a good proportion of low income families from informal economy in both the countries may not be able to fully endure the burden of old age dependencies - mired by major socio-economic and health issues. To be more precise, enduring age dependencies may turn out to be difficult for a large number of down sized nuclear families[3], especially because of declining work opportunities for the aged, their functional incapacitations, perpetual poverty, no or negligible social assistance, compression in real public health expenditure, etc. The study further postulates that in its present form, the pro-market changes in their economic strategies may not fully conform to their emerging age structure changes, and might turn to a situation fraught with a significant economic-demographic mismatch (see Appendix 1).

The underpinnings behind this entire argument lay into the following:

1. *For most of this century, India and Pakistan will remain young and old both. Young, owing to past fertility and its momentum; and old, because of their changing demography and added life span. Especially, the size of graying population in both the countries are likely to catch at an accelerating pace.* Not only that, recent projections reveal that the pace of ageing in Pakistan may surpass India over the next few decades. In India, for example, the size of population aged 60 or more may increase from 87.7 million in 2005 to about 308.5 million by the first half of this century – i.e., an increase of more than three and half times over these years. In contrast, this increase in case of Pakistan may be more than 4.7 times – i.e., from 9.3 million in 2005 to 44.1 million in 2050 (see UN's population projections, 2002 revision). These projections also reveal persistent bulges in their working age (25+) populations, needing matching growth in their employment opportunities.

2. *Fast emerging market regime in India and Pakistan along with almost non-existent health and financial securities for the aged.* Deceleration in high productivity employment in the

[1]This paper draws heavily from an earlier study by Alam (2004a). Some of the findings included in this paper have also been discussed in the 5th Annual Conference of the Pakistan Association of Population (PAP) held in Karachi (Pakistan) from 14th to 16th December 2004.

[2]In 2003, India and Pakistan have jointly accounted for about 87 percent of the population in South Asia as per the medium variant projections made by the UN (2002 Revision, Vol. II). It may also be clarified that the South Asia in this study is used as those of the seven SAARC countries.

[3]The share of nuclear households in India was little over 53% of the total as per the 1991 Census – an increase of over 9-percentage point over the preceding ten years. For a discussion on this, see Vijayanunni (2000). On problems arising due to lack of uniformity in conceptualisation of families or households, see Uberoi (2000).

sub-region aggravates the situation further. Jointly, (1) and (2) are expected to bring certain non-conformity between the changing demography of the two countries and their emerging economic regime (see diagram in Appendix 1)[4]. It may also raise questions about the well being of special population groups including the aged, widows, and low-income households with elderly co-residents to support. We argue that in many cases, familial transfers may not suffice to meet even the basic necessities of the aged including health.

3. *Casualization of labor market, lower quality jobs and labor vulnerabilities* may constrain family transfers and make the aged unsecured. It may particularly be true for countries like Pakistan with slower pace of fertility decline and high young age dependencies.

4. *With no or grossly inadequate protective security for the aged, the idea of down sizing the family loses some of its logical moorings – especially for low-income households.* It may as well create a conflict between the public and the private interests.

5. *Left to fend for themselves, and with decaying non-market institutions,* aged may soon be facing the threat of exclusion. With problems such as frailty and poor old age health, the growing debate on healthy and active ageing seems inconsequential.

To find further justifications to some of these arguments, this paper begins with a brief description of changes in demographics of these two major South Asian countries. How far these changes are in conformity with their existing or future economic scenario, and what security environment the ageing population in these countries currently enjoys will follow in sections 3 to 6. Arguably, an examination of these issues would help in identification of insecurities being faced by the young and the old in the underlying two countries. In terms of its value addition, this study is expected to build a case for: (i) working to ward-off the risks of economic-demographic mismatch, (ii) a strong health and income security net for the aged, and (iii) its public-private financing mechanism.

A word of caution about the study: for lack of readily available data on aged in Pakistan, much of this analysis remains confined to India. Some of our arguments have however been substantiated by inferring from recent economic and ageing literature in Pakistan. It is observed that the ongoing economic liberalization in India and Pakistan may imperil the aged and underprivileged – at least over the short term. Combined with growing age dependency and perennial poverty, the study seriously doubts the adequacy of the familial transfers – in particular to ensure the financial and health security of the ageing population. The problem may even be serious with households comprising widows or persons in *"old old"* categories[5]. This can easily be gauged by their: (i) high disease prevalence – causing functional incapacitation among the old[6], (ii) large-scale poverty and income inequalities, (iii) lack of long-term saving instruments with ensured terminal return[7], and

[4] This diagram attempts to portray that the current economic regimes of India and Pakistan may add to their GDP growth – real or potential - but at a cost of decelerating employment elasticity. As both the countries will also be adding to their younger populations, there may be problems in clearance of labour market and, to that extent, an economic-demographic mismatch may emerge. Family transfers may therefore not be easy.

[5] Health financing studies relying on data from industrial societies have revealed that the growth of the elderly population has had little to do with the growth in health expenditures. To them, these spurt are basically technology driven. This may or may not be true for the Asian societies. Moreover, a faster growth of "*old old"* - particularly in countries like India and Pakistan – is likely to affect the demand for health care, requiring additional expenditure on health infrastructure and delivery. Long-term care is another emerging problem due to very high prevalence of ADL-IADL disabilities among the aged in India (Alam, 2005; Alam and Mukherjee, 2004).

[6] See, for example, Alam (2005), and Alam and Mukherjee (2004).

[7] See Alam (2004c).

(iv) inadequate public expenditure on health and other welfare activities[8]. In addition, there are issues relating to health sector reforms with growing privatization of health services, changes in drug policies, non-existent social insurance, informalization of the labour market[9] that usurps even the normal labour rights and compels a large proportion of labour market entrants to settle for lower wages, etc.

Given these facts, the study strongly favors providing social and health security cover to the aged through a revamp in public subsidies and other welfare strategies in the Center and states. Social health insurance - financed through a blend of cess on polluting and health hazardous industries, individual's contributions in the form of pay roll tax, public transfers, long-term saving instruments – needs urgent public attention. Tax sheltered retirement accounts may also be devised to provide income security on lines of other ageing societies. We also feel that the aged would soon emerge in both the countries as large consumer groups worth serious reckoning by business establishments, health care providers, insurers, etc. The market segments linked with the elderly demanded goods and services are expected to gain substantially with increase in ageing population. Income security of the aged may therefore interest these benefiting organizations. Business demography of these populous countries may therefore be a subject of greater scrutiny and research.

2. Demographics of India and Pakistan: Selected Indicators

At the macro level, demographic transitions usually pass through the following three stages. First, high fertility coupled with high mortality and low life expectancy at birth. Second, a downturn in fertility behavior but mortality declines at a faster pace followed by a slow increase in longevity. Third, a fast declining fertility and mortality associated with higher survival chances - both at birth and thereafter. The last two stages are invariably a precursor of major changes in age compositions. Table 1 clearly reveals that India and Pakistan are fast moving towards the third stage – fraught with large-scale bulging at the higher ends of their age pyramids, bearing several important socio-economic and health ramifications. This paper premises that the planners and policy makers in both the countries are yet to take recourse to meet these ramifications. Admittedly, however, all this is not without reason, and the fast growing population in both the countries has always been at the higher reckoning. But now with the new changes in offing, an ultimate question may be: can the evolving age compositions with faster ageing in these countries be overlooked? Or, do the economic and health regimes of the two countries fully conform to their demographics? The discussion to follow is an attempt to explore some of these questions little further.

Another observation emanating from Table 1 relates to the emergence of India as a country with very high potentials for a swift and faster demographic shifts over the coming years. This may be noticed from the details on replacement level of fertility for the two countries. Table 1 suggests that India is likely to achieve this target before 2020 - presumably between 2012 and 2015.[10] The same is true for the growth of its population. It can be observed that the growth of population in India is expected to decline significantly over the coming decades (though the intra-country variations are expected to persist). Pakistan may however surpass India in terms of the life expectancy at birth, and hence the growth in ageing population (Table 1).

[8] For details, see Prabhu and Chatterjee (1993).
[9] For a detailed discussion on this, see Alam and Mishra (1998).
[10] See, for example, K Srinivasan (1999).

Table 1: Demographics of India and Pakistan: Selected Indicators
(1950-60 to 2045-50)

TOTAL FERTILITY RATES (TFR): Number		
Decades	India	Pakistan
1950-60*	5.95	6.65
2000-05	3.01	5.08
2010-15	2.46	4.11
2020-25	2.14	3.14
2030-35	1.92	2.53
2045-50	1.85	2.06
POPULATION GROWTH RATES: Percentages		
1950-60*	2.13	2.34
2000-05	1.51	2.44
2010-15	1.20	2.36
2020-25	0.85	1.88
2030-35	0.54	1.51
2045-50	0.26	0.99
LIFE EXPECTANCY AT BIRTH (e^0): Years		
1950-60*	40.65	40.50
2000-05	63.90	61.00
2010-15	66.30	/65.00
2020-25	67.80	68.50
2030-35	70.00	71.40
2045-50	73.80	74.70

Source: * UN (1999), World Population Prospects (1998 Revision). Information from 2000-2005 onwards was obtained from UN (2003), World Population Prospects (2002 Revision).

Yet another observation in the underlying context may be the fast convergence of both the countries to a situation, *inter alia*, marked by the:

- higher population momentum (Table 2-B). This phenomenon would obviously keep both the countries young with a very large fraction of populations in working ages, and

- helped by declining mortality and added life span - especially at later ages - large segments of population in both the countries would grow older facing serious health and income security issues (see the population pyramids given in Figures 1-4). This may happen more severely with the current and the next few cohorts of the aged - although the future cohorts may have their own problems.[11]

Of the two situations sated above, the former may act to flood the labour market and affect the bargaining strength of the job seekers, while the latter would require both: (i) income security, and (ii) enhanced medical care for the aged along with growing need for long term care due to their poor functional health and high prevalence of ADL/IADL disabilities As the subsequent discussion would reveal, some of these problems now already exists in India and may turn to aggravate further with time (see Alam 2005; Alam and Mukherjee, 2004). Moreover, any explicit policy response to counter some or all of these issues is not in sight – neither in India nor in Pakistan.

[11] See, for example, Chappell and Penning (2001).

3. Selected Macroeconomic and Health Indicators of India and Pakistan: Do These Indicators Conform to their Emerging Demographics?

Among other things, the two neighboring economies of India and Pakistan are also known for their enormous populations – bulk of them in reproductive ages and generate momentum for sustained growth of population in coming years. Unfortunately, a great deal of these populations suffer from perennial poverty, asymmetric income distribution, various forms of insecurities, under-employment, poor health conditions, lack of basic amenities and high growth of labor. In some of these traits, Pakistan outperforms India, and vice versa (Table 2; also see ILO, 2004). Similar observations emerge from a few of the more recent studies dealing particularly with the economic climate in these countries and their tryst with pro-market reforms (Srinivasan, 2002). In the process, however, a whole range of social issues – stemming from the recent shifts in demographic behavior and ageing - remained sidelined.

While the mandate of this analysis doesn't need to provide a detailed review of economic or other forms of maladies in these two countries, it wouldn't perhaps be very inappropriate to mention some of their macro realities - many of which are apparently fail to conform well to their ongoing age structure changes.

As was noted, the current economic regimes in India and Pakistan are likely to deal in coming years with two demographically mediated issues: (i) swelling of the labour markets due to bulging in 25+ populations[12], and (ii) accelerating growth in size of ageing adults including *older old* (i.e. 75+) due to growing survival changes and added life span. As it is, the current economic regimes in both the countries do not seem to have much to offer to either of these population groups. Speedier expansion in the labour markets, for example, require corresponding increase in job opportunities – that too at the wage rates commensurate with prevalent market prices of goods and services (Baqai, 2004; Bhattacharya and Shakthivel, 2004). Increase in the number of aged would require matching support provisions – ranging from economic and medical care to shelter, dignity and mental peace (Alam, 2004b).

Like in most other traditional societies, elderly care is the familial responsibility both in India and Pakistan.[13] This would however be possible if the members of the average families are better off and left with transferable income. Table 2 however provides a picture that makes old age support for a large fraction of population in both the countries a difficult proposition (see Table 2G and 2H for poverty ratios)

Further, acceleration in growth of young and old in both the countries are accompanied by several complex issues like decelerating employment opportunities, high growth of labor, income inequalities, poor formation of human capital, inadequate access to health services, and so on (see Table2; also see ILO, 2004). Given the enormity of the situation, we postulate that any bailing out process would require creating a link between demographically mediated age structure changes on the one hand, and the human development strategies of the two countries on the other.

Information provided in Table 2 (Panels 2A to 2N) highlights several disturbing facts about these countries. At a broader level, these details suggest that Pakistan has an edge over India in

[12] We have tried to work on the basis of 25+ ages because of their highest labour force participation rates. We argue that the bulging in these ages would strain the labour market even more severely.

[13] Governments in both the countries base their old age policies on the assumption that the families will continue supporting their aged. In many cases, however, these traditions are fast eroding. A recent study on ageing in Pakistan by Clark et al (2002) supplements this argument. India is also facing similar problems.

Table 2: Selected Socio-Economic and Health Indicators of India and Pakistan

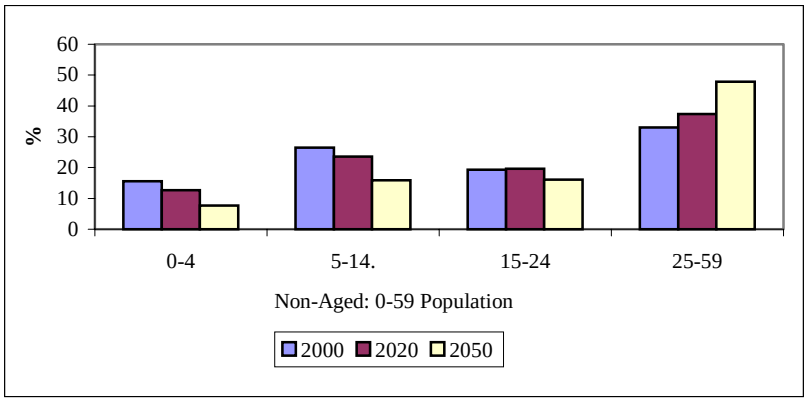
Socio-Economic and Health Indicators	India	Pakistan
Panel A. Population (Million)	1028.61 (2001)	132 (1998)
Panel B. Population Momentum	1.4	1.7
Panel C. Average G/R of Labor Force (%)		
1980-98	2.0	2.9
1998-10	2.0	3.3
Panel D. Employment Elasticity		
1983 to 1993/94	0.52	To be added
1993/94 to 2000	0.16	To be added
Panel E. GNP Per Capita (US $)	450 (2000)	440 (2000)
Panel F. Annual Per Capita Growth of GDP (%)		
1995	5.2	2.7
2002	5.2	2.4
Income inequalities: Gini Coefficient	0.378 (1997)	0.410 (1998-99)
Panel G. Persons Below Poverty Line (%)		
Rural	27.1 (1999-00)	36.9 (199-96)
Urban	23.6 (1999-00)	28.0 (1990-96)
Total	26.0 (1999-00)	34.0 (1990-96)
Panel H. International Poverty Line		
Below 1 US $ (%)	44.2 (1992)	31.0 (1991)
Below 2 US $ (%)	86.2 (1992)	84.7 (1991)
Panel I. %age Share of Income/Consumption by Different Income Group		
Lowest 10 %	3.8 (1997)	4.1 (1996-97)
1st 20 %	8.1 (1997)	9.5 (1996-97)
2nd 20 %	11.6 (1997)	12.9 (1996-97)
3rd 20 %	15.0 (1997)	16.0 (1996-97)
4th 20 %	19.3 (1997)	20.5 (1996-97)
Highest 20 %	46.1 (1997)	41.1 (1996-97)
Panel J. Pr. Investment as % of Gross Dom. Fixed Invest.		
1980	55.5	45.0
1997	70.1	58.2
Panel K. Adult Literacy Rate (% of 15 and above)	57	43
Panel L. Access to Health Care (%)		
Access to General Health Services (%)	85 (1991-95)	55 (1991-95)
Safe Water (%)	88 (2000)	88 (2000)
Sanitation (%)	31 (2000)	61 (2000)
Physician per 100,00 Persons (Number)	48 (1990-99)	57 (1990-99)
Panel M. Human Development Index (HDI)		
1960	0.206	0.183
2000	0.577	0.499
Panel N. 60+ Population & Old Age Dependency Burden		
60 + Population (in million)	76.8 (2000)	8.1 (2000)
60 + Dependency Burden: 2000 (per one hundred 15-59 pop.)	12.9	10.9
60 + Dependency Burden: 2050 (per one hundred 15-59 pop.)	23.6	19.8

Source: Different sources were used including the World Bank (2000, 2001); Human Development Centre (1997, 2002); ADB (2001); Planning Commission of India (2002); UN's Population Prospects (2002 Revision).

terms of income distribution parameters[14], sanitation and availability of medical personnel like physicians.[15] Economically, however, India appears doing relatively better. Another very disturbing factor in case of Pakistan is the growth of its labor force. By all available indications and trends in economic growth, absorption of such a high growth of labor in Pakistan would indeed be difficult (Baqai, 2004; Ghayur, 2001; Joekes, Ahmed et al. 2000).

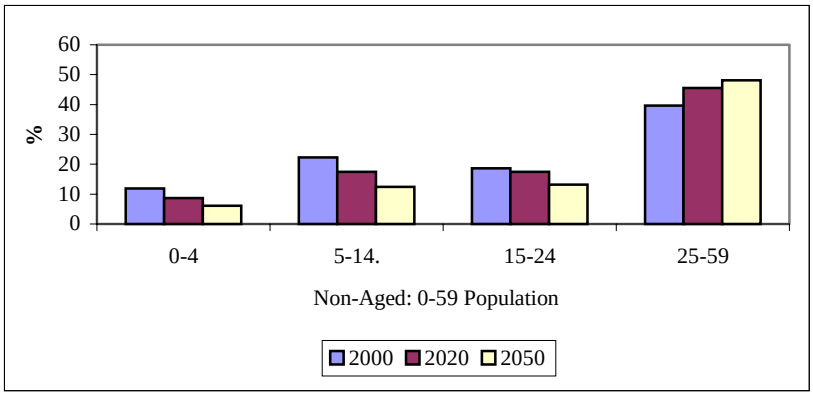
It doesn't however mean that the labor issues are in any way less significance in India. In both the countries, as may be noticed from Figures 1 and 2, the bulging in 25+ populations over the coming decades is striking. Since the labor force participation of persons in this fast growing age group is maximum – often close to 100 percent – the nature of problems ahead are self-explanatory (see Panel 2D for the decline in employment elasticity in India).

Figure 1: Changes in Shares of Below 60 Population (%): Pakistan - 2000-2050
Growing 25+ Persons



Source: UN (2003): World Population Prospects (2002 Revision).

Figure 2: Changes in Shares of Below 60 Population (%): India - 2000-2050
Growing 25+ Persons



Source: UN (2003): World Population Prospects (2002 Revision).

[14] Data on income distribution in Pakistan, especially the head count ratios of poverty, suffers with serious conceptual issues as it often relies on the household poverty levels rather than the individual's poverty level. Further, the cut-off income level to decide the persons below or above poverty levels is also suspect (Joekes, et al, 2000).

[15] These indicators may however mean little while discussing questions such as access, equity or efficiency.

Anant, Sundaram and Tendulkar (1999) have also highlighted many similar issues in an exclusive study on labor and employment in South Asia. Their study, *inter alia*, attempted to examine the growing labour force (often mentioned as demographic bonus) in South Asia followed by declining job opportunities in its high productivity sectors. On the fillip side, the study has noted a gradual decline in dependence on agriculture in most of this region. The study also suggested a general rise in real wages and improvements in sectoral productivity. Despite these favorable developments, the study confronted with several difficult issues affecting the two countries. A few notables are:

- Low levels of social and educational attainments: denying market driven opportunities to large segments of population (especially in India),
- Growing size of labour force due to demographic bulging and decline in labour absorption by higher productivity sectors (particularly in India, Pakistan and Bangladesh),
- Marginal change in work participation rates during eighties and early nineties in India (it declined from 421 to 418 per thousand population during this period), and
- Higher levels of open unemployment and high Informalization of labour market.

The emerging economic and employment scenario might force growing number of people to seek refuge in low paid informal economy without any form of social security. This is indeed happening in India with growing informalization of the labour market (Alam and Mishra, 1998; ILO 2004). An inherent risk with such a situation may be the inability of many impoverished low-income households to endure the growing burden of old age dependencies – fraught with serious health issues. The discussion to follow in subsequent sections is mostly devoted to these issues.

4. The Other Side of the Demographics in India and Pakistan: Ageing, Growing Share of the Older Olds and Emerging Issues

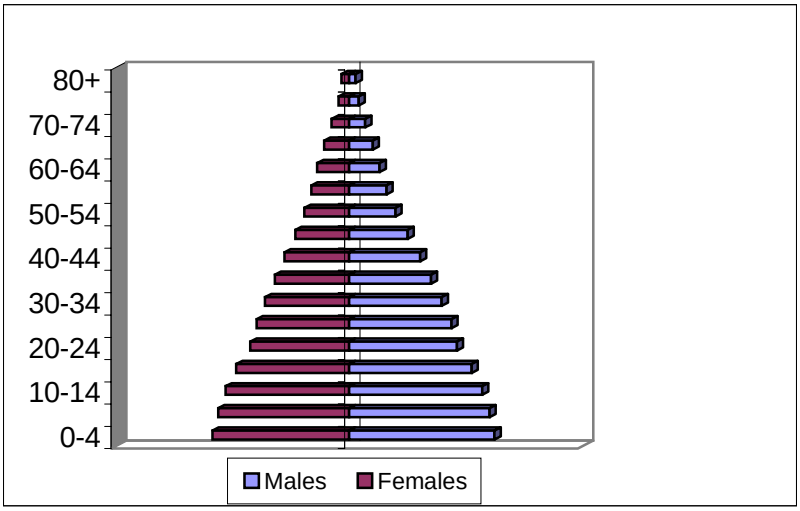
As was noted, India and Pakistan would soon be reaching to face bimodal age structure with rapid societal ageing. What does it imply to age pyramids in these countries? What shape do these pyramids take overtime? How do they differ between India and Pakistan – especially because the latter is still faced with higher TFR? An attempt is made to discuss some of these questions briefly before we move to our focal concern – namely the growing health insecurities among the aged. We examine these issues on the premise that - barring for small population groups - the emerging income-employment situation in India and Pakistan may make old age care difficult for most of the families and individuals. In particular, given the low health conditions of the aged, their functional disabilities and persisting socio-economic disparities, we strongly argue for evolving a social health insurance mechanism with varying levels of benefits and premia structure. We further posit that such a measure cannot be postponed any longer. It may, however, require a strong and viable financing mechanism through a mix of public and private sources including special long term saving instruments with assured returns to ensure medical and non-medical care in later life.

Age pyramids of both the countries are given in Figures 3 (3a-3c) and 4 (4a-4c) for three time periods – namely, 2000, 2020 and 2050. To ensure symmetry in data, we used the most recent UN projected age structure (medium variant, 2002 revision) for this exercise.

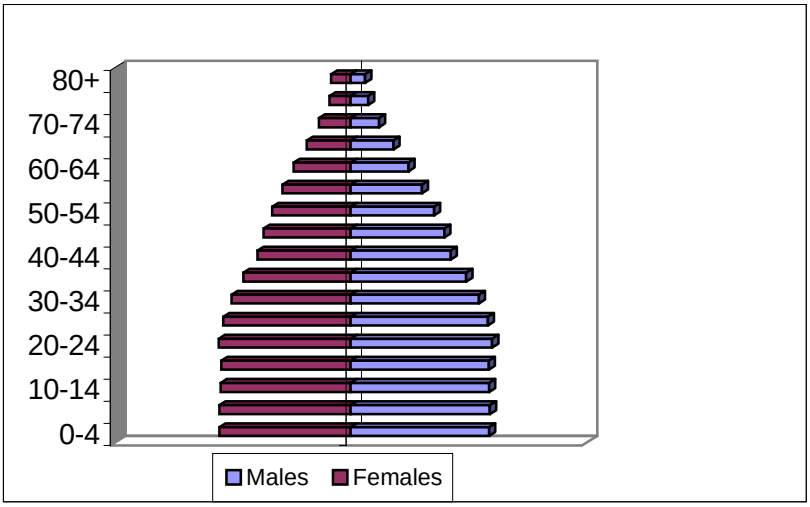
Broadly, these pyramids indicate that the two countries may not converge demographically before the later half of this century. Pakistan may however surpass India in terms of life expectancy much sooner. With this, Pakistan may face the issues linked with the bimodal growth of population involving young and old little more severely.

Figure 3: Changes in Age Composition of Population: India

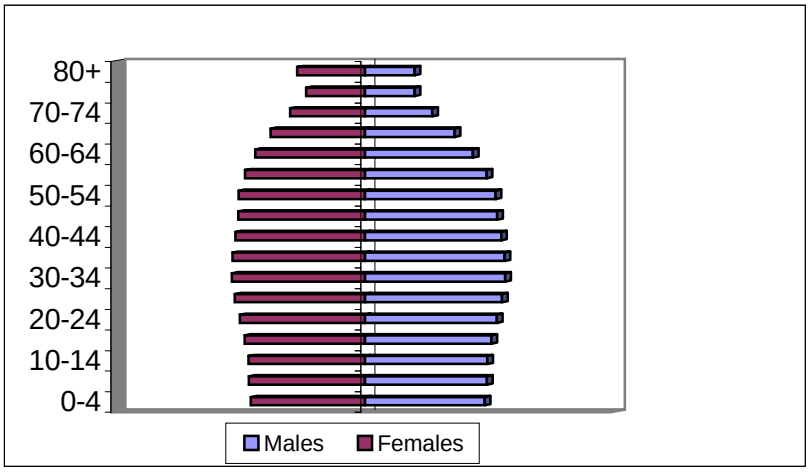
3a: India – 2000



3b: India – 2020



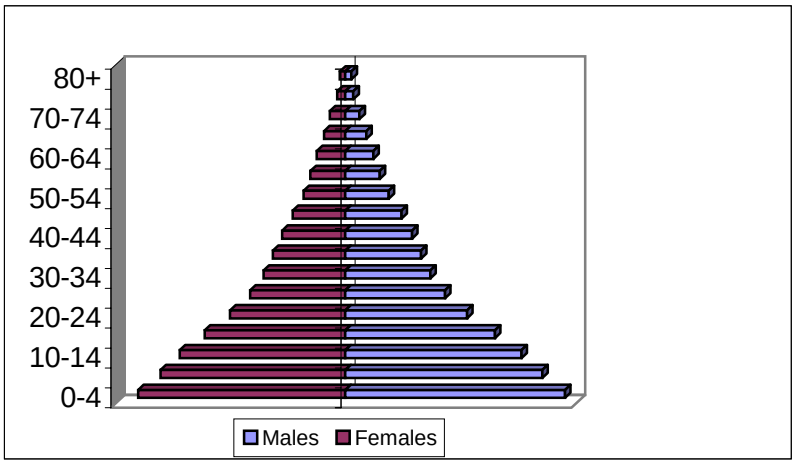
3c: India – 2050



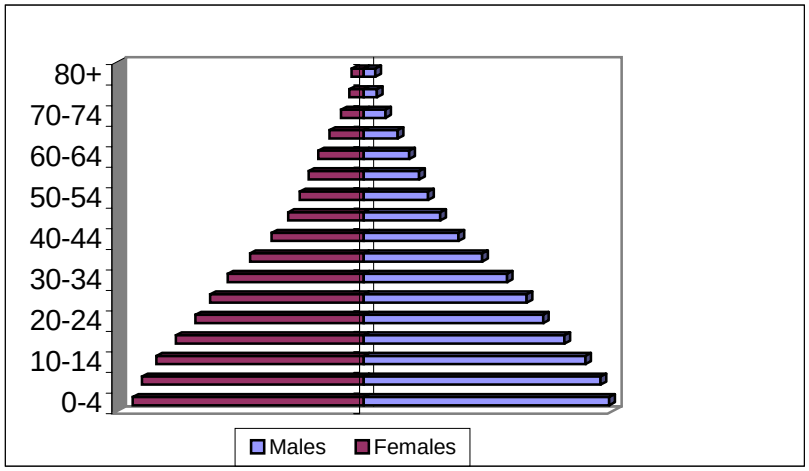
UN (2003): World Population Prospects (2002 Revision).

Figure 4: Changes in Age Composition of Population: Pakistan

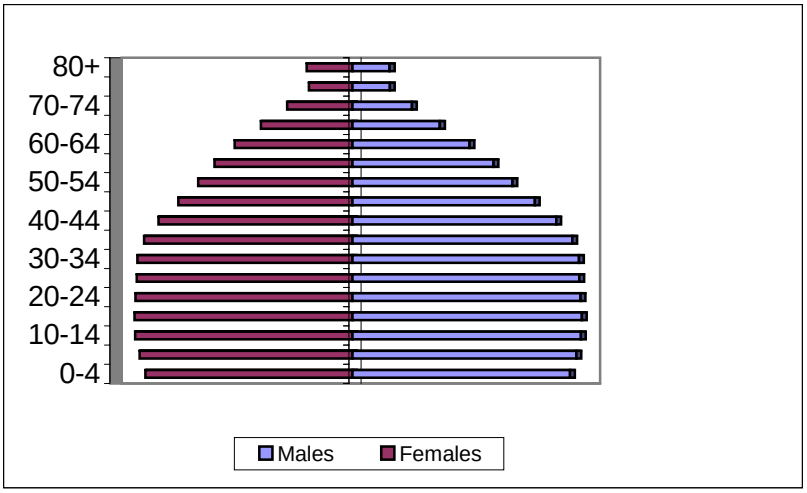
4a: Pakistan - 2000



4b: Pakistan - 2020



4c: Pakistan - 2050



Source: UN (2003): World Population Prospects (2002 Revision).

Another observation from these pyramids relates to the accelerating growth of *old old* in 75+ or 80+ age categories – with possibilities of growing demand for health and long term care services. These changes further indicate the need for a major make over in developmental strategies of both the countries, where these make over may go well beyond the traditional measures of minor subsidies or additional welfare funding.

5. Societal Ageing in Pakistan: Growing Issues and Feeble Responses

Despite a continued debate in recent demographic literature on changes in fertility behavior in Pakistan (Feeney and Alam, 2003; Soomro, 2000; Blacker and Hakim, 1999; Sathar and Casterline, 1998; Sathar and Kiani 1998), the ramifications of these changes - especially ageing or its attendant issues – are yet to receive wider attention, especially by public planners and policy makers. It is partly because of the fact that the mainstream demographers in the country are mostly engaged in debating causalities in current fertility reduction (Soomro, 2000) without going deeper into its ramifications. Further, ageing or the burden of old age dependency on families and the society is yet to take a more discernable shape – perhaps on account of higher fertility, participation of aged in economic activities (Nasir and Ali, 2000), and flowing remittances (Clark, et al. 2002).

Notwithstanding these lack of concern, the UN projections on age structure changes in Pakistan (UN, 2003) reveal a very fast growth of societal ageing in the country – faster than India (Table 3). Even assuming for certain margins of projection error, it may perhaps be agreed that the ageing in Pakistan would follow an accelerating pace over the coming decades.[16] Especially, the growth of older old exceeding 75 years of age is expected to be much higher. Table 3 works out these changes more explicitly. This table shows highest projected growth in size of 75+, especially women. These changes may also have important supply-demand implications for the country's health services and providers of long-term care.

Table 3: Annual Average Growth of Population by Age Groups: 2000 – 2050
Pakistan (UN: 2002 Revision)

Age Groups	G/R: 2000 – 2020 (%)		G/R: 2020 – 2050 (%)		G/R: 2000 – 2050 (%)	
	Male	Female	Male	Female	Male	Female
60--64	3.20	3.13	3.34	3.35	3.28	3.26
65-74	3.09	2.96	3.42	3.57	3.29	3.33
75+	3.58	4.21	3.90	4.23	3.77	4.22
Total Pop.	2.35	2.37	1.41	1.46	1.79	1.82

Source: Calculated on the basis of UN (2003), World Population Prospects (2002 Revision).

Following these changes, some attempts have been made by analysts in Pakistan to review the ageing issues in the country and required institutional mechanism both with in and outside the government to improve security environment for the aged (Afzal, 1994, 1999; Khan, 1999; Clark, et al. 2002). A UN sponsored study by Afzal (1999), for example, scans through these details including a few recent attempts by the government to draw action plans for the welfare of the aged. Pakistan Government (Special Education and Social Welfare Division) has also commissioned a couple of multi-centric surveys in Lahore (1988) and Islamabad (1990) to make assessments about the ageing and its issues. Nothing tangible has however been resulted so far. As regards the social security, Pakistan apparently has very few such schemes except for a small fraction of organized workforce comprising civil servants, military personnel and employees of public sector

[16] Elderly population in Pakistan, as already noted in the beginning, would grow from 8.1 million in 2000 to 15.4 million in 2020, and 44 million in 2050 (UN, 2003).

undertakings. What fraction of total workforce draws these benefits, and whether this fraction is declining because of down sizing in public sector employment is not very clear.

Outside the government, a few nonprofit voluntary organizations (e.g., the Senior Citizens Foundation of Pakistan or Association of the Retired Persons) have also been working as pressure groups to seek benefits in personal taxations, and subsidized medical care. These organizations have also succeeded in sensitizing the government to include elderly welfare as a part of its development agenda with gender specific public provisioning for the destitute elderly.

Table 4: Elderly Status in Pakistan: Lower Work Participation, Poor Filial Support and Lonely Living for Many

	Female (%)	Male (%)
A. Living Arrangement of older persons:		
Alone	11.6	9.1
With spouse	19.2	30.9
Spouse and children	6.3	14.0
With married son	51.6	37.0
Others including daughters/relatives	11.3	9.0
Total N	473	465
B. Do adult son/s provide support?		
Yes: provide support	18.2	13.1
No: do not provide support	72.1	73.5
No Response	9.7	13.3
Total N	473	465
C. Proportion of support provided by son/s:		
Total support	18.2	13.1
Partial Support	33.8	34.8
No support	38.3	38.8
No Response	9.7	13.3
Total (N)	473	465
D. Work Status of older respondents:		
Working for pay	14.1	36.5
Not working	71.2	58.5
No Response	14.7	5.0
Total (N)	473	465
E. Reasons for not working/inactive: *****		
Sick (different diseases)	22.27	28.67
Eye impairment/blindness	7.56	10.19
Functionally dependent	2.52	0.0
Frail/weakness	22.69	34.39
Too old	22.69	22.29
No need	17.65	0.0
No job opportunity/unemployment	1.26	0.0
Others (including overweight)	3.36	4.46
Total (N)	238	157

Source: Clark et al. (2002). Information culled out from different tables

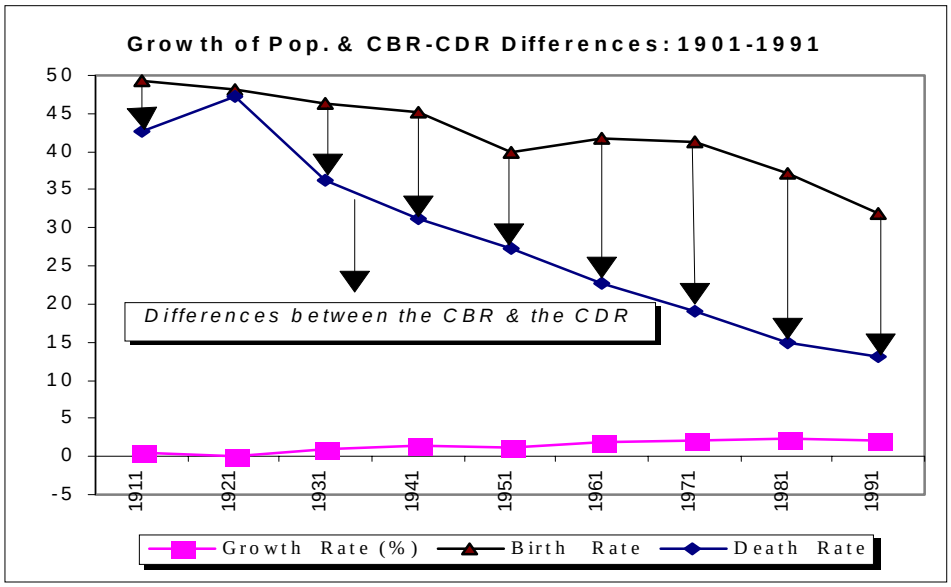
*****Various diseases were regrouped/merged.

Beneath these feeble responses and the unsustainable belief about continued filial support, ageing Pakistan is turning to become more and more weird. This has particularly emerged from a field-based study by Clark et al. (2002), which was *inter alia* designed to test the assumptions about the family support to the aged. Based on a multi-centric survey in Punjab province covering 938 elderly men and women, the study reveals significant erosions in older values - leaving a big fraction of the older persons in lurch. Table 4 tries to present a few of these details from this study. And even a cursory scanning of these details validates our earlier argument underlining unsecured ageing and limited family support to the aged. Contrasting the findings of Nasir and Ali (2000), Table 4 also indicates a low work participation of the elderly persons. Close to two-third of men and over four-fifth women reported themselves inactive, largely because of poor physical health, impaired eyes, frailty and senescence (Table 4). Obviously, it amounts to suggest high economic and financial dependencies of the aged. Many of these issues have affected the Indian aged as well..

6. Population Ageing in India: Emerging Health and Non-health Issues

While the rest of this discussion is entirely focused on health and economic dimensions of ageing in India, some background information are provided below in support of our two basic arguments: (i) growing increase in size of ageing population would lead to exert heavy pressure on health services with greater demand for geriatric medicine and long term care, and (ii) public pillared security measures for older persons may not be neglected for too long. We also conceive that in a situation followed by the declining fertility, erosion in traditional values and the growing role of market, formal support institutions and monetary mechanisms to finance the old age care will have to be developed with strong public support. Failing which, the health scenario of the country – already mired because of high disease burden - may worsen even further. We begin by an attempt to describe the ageing potentials that India had for past several decades.[17] We argue that despite

Figure 5: Trends & Potentials of Societal Ageing In India



Source: Alam (2001).

[17] Also see, Sharma and Xenos (1992).

these potentials, the issues of ageing, relevant for millions of aged from low-income families, have remained unattended. This apathy has caused (and will continue to cause) serious insecurity issues for the aged in India as may be inferred from the details presented below.

As widely documented, India has a long history of struggling with its large population base and slower fertility reduction. However, there has been a gradual improvement over the past twenty years or so with a perceptible decline in overall fertility level (Table 1). This whole process was however camouflaged by the faster ageing, caused by big fertility-mortality differentials (shown by arrows in Table 5), and growing longevity – especially at the later end of the life cycle.

With the process of fertility transition in India gaining further momentum over the coming years, the ageing of population will assume an accelerating pace. Also, the share of very old (75+) – a health-wise more vulnerable lot - is expected to rise even at a faster pace (Table 5).

Table 5: Gender-wise Growth of Population in Different Age Groups India - 2000 To 2050

Broad Age Groups	Annual Average Growth Rate (%): 2000-2050	Annual Average Growth Rate (%): 2000-2050
	MALES	FEMALES
80+	4.04	4.27
75+	3.61	3.78
60+	2.80	2.84
0-14	-0.41	-0.38
15-59	0.89	0.96
Total Pop.	0.77	0.87

Source: Calculated on the basis of UN (2003), World Population Prospects (2002 Revision).

Besides, two other observations emanating from Table 5 need attention. One is relating to the differences in growth of the total and the 60+ populations. The latter surpasses the former quite significantly. And the second relates to the negative growth of 0-14 age groups (- 0.26 males and - 0.22 females). While the attendant implications of the second (i.e., negative growth of population in 0-14 age groups) may take over the country with certain time lag, we posit that the ramifications of ageing would follow much sooner due to: (i) high old age poverty, pro-market institutions, lack of work opportunities for the aged, and too much reliance on families without any major public assistance, (ii) poor health of the older persons, (iii) insufficient health expenditure by states, and (iv) inadequate social assistance for the aged. We try to substantiate some of these points below.

6.1 Declining Work Participation and Poverty

Tables 6 and 7 help to provide an idea about the successive decline in work participation of the aged, and their poverty issues. Clearly, in terms of the elderly work participation, India is also on a loosing ground. Additionally, it holds irrespective of the gender and place of residence, though the rural aged appears to be economically more active than their urban counterparts (Table 6). Much of this differential may however be a coping strategy for the rural old.

With the bleak work prospects for the aged, the old age poverty in India appears to be far too disturbing. While the age specific data on poverty is not readily available, we tried to draw

Table 6: Declining Work Participation Among the Elderly: All India (Census Figures)[18]

Sex	ELDERLY WORK PARTICIPATION: URBAN (%)			
	1961	1971	1981	1991
Persons	35.2	31.5	27.5	24.3
Male	58.4	55.4	48.3	42.9
Females	11.4	6.4	6.5	6.3
	ELDERLY WORK PARTICIPATION: RURAL (%)			
	1961	1971	1981	1991
Persons	52.0	45.5	43.1	43.1
Males	79.9	77.4	69.1	65.4
Females	24.3	11.3	15.9	19.0

Note: Work Participation Rates (WPR) is based on the Census Figures at the All India level.

certain inferences on the basis of an exercise reported in Table 7. Using consumption expenditure data separately for the rural and the urban households with at least one elderly co-resident (52nd round National Sample Survey, 1995-96), we observe very high poverty in terms of the per capita monthly consumption expenditure (PCMCE) in most of the major states with more than 90 percent of the country's total population. The low consumption level is also accompanied by very high coefficients of variation in most of the states under consideration – implying that the aged in India are faced with extremely diverse economic situation. Interestingly, while the mean consumption level is disturbingly low in rural areas, the levels of consumption disparities are turning out to be much higher among the urban households.

Table 7: Variations in Per Capita Monthly Consumption Expenditure (PCMCE) of Households with At least One Elderly Co-resident – All India and Major States 1995-96

Major States	Rural		Urban	
	Mean PCMCE (Rs.)	$\sigma/\bar{x}$ *100 (%)	Mean PCMCE (Rs.)	$\sigma/\bar{x}$ *100 (%)
Andhra Pradesh	323.79	56.7	534.42	75.0
Bihar	282.39	40.4	435.97	57.9
Gujrat	411.95	55.3	607.83	54.2
Karnataka	331.43	53.4	511.66	60.0
Kerala	455.73	72.1	529.73	68.3
Madhya Pradesh	314.55	47.6	455.33	55.1
Maharashtra	345.13	52.0	678.99	75.3
Orissa	279.10	45.5	424.69	48.5
Punjab	549.04	51.0	665.10	45.6
Rajasthan	378.43	36.8	513.50	48.8
Tamil Nadu	341.49	47.1	523.57	65.3
Uttar Pradesh	330.39	53.2	506.41	71.8
West Bengal	334.50	46.7	545.72	66.0
All India	357.40	55.8	559.99	66.9

Source: NSS 52nd Round Data CD

[18] Work participation for older persons from 2001 Census is still awaited.

The level of poverty faced by the aged brings out another significant question too – namely, how to define the old age poverty. To be precise, should the old age poverty be defined conventionally on the basis of the calorific norms or its monetary equivalents? If not – and assuming that the aged differ with others in terms of their basic consumption basket - a modified criterion of poverty may be needed to quantify the level and extent of old age poverty in India and Pakistan. Presumably, any such quantification would attach food and medical care with maximum weights.[19]

6.2 Familial Support to the Elderly

The NSS in its 42nd (1986-87) and 52nd (1995-96) rounds provided several details about the socio-economic status of the aged including those relating to the caregivers and their relationship with the care seekers. Some of these details are provided in Table 8. Two observations bear attention. One, spouse and the children are the two major sources responsible for the old age care. And second, grandchildren and other relatives – particularly the latter - are now increasingly withdrawing to undertake any such responsibilities. To illustrate, Table 8 shows a considerable decline in the share of care providing relatives over the period between 1986-87 and 1995-96. This is true both for the rural as well as the urban areas. Not to a similar extent, but a declining trend may also be noted for the children and the grand children. Going by these attitudinal changes, dependence on families may not remain viable for many of the aged in India. Therefore, a chain of formal care institutions will have to be mooted shortly with public subsidies.

Table 8: Nature of Care Providers: All India

(Percentages)

Sex	Spouse		Own Children		Grand Children		Others	
	1986-87	1995-96	1986-87	1995-96	1986-87	1995-96	1986-87	1995-96
RURAL								
Male	7.0	11.3	75.0	76.6	6.2	5.0	11.8	7.1
Female	11.5	15.9	73.8	71.7	6.4	5.2	8.3	7.2
Persons	9.5	14.2	74.4	73.5	6.3	5.2	9.8	7.1
URBAN								
Male	6.2	10.5	78.0	79.2	6.1	5.4	9.7	4.9
Female	11.3	18.2	72.3	69.5	6.5	5.6	9.9	6.7
Person	9.0	15.6	74.9	72.8	6.3	5.5	9.8	6.1

Source: National Sample Survey, 52nd Round (1995-96) - Report No. 446.

6.3 Multiple Diseases and the Low Health Standards of Aged: Some Causal Risk Factors

One of the worst problems faced by many countries in South Asia – and particularly India – is the high burden of multiple diseases, especially among the aged. Based on self-reported health conditions, Table 9 provides a few details on single and multiple diseases suffered by the rural and urban aged, separately. Contrary to the commonly held belief, Table 9 reveals higher proportions of aged suffering from different diseases in rural areas than their urban counterparts. At its worst are indeed those who suffered by the multiple (co-morbid) conditions. Table 9 suggests a considerably large proportions of such ailing aged – mostly in urban areas – except in states like Karnataka,

[19] A recent households survey with the elderly co-residents by Alam (2004b) in urban Delhi has shown five most essential needs of the aged. The highest priority was attached to the food followed by medical services, clothing, shelter, and socio-religious or entertainment related expenses.

Punjab and west Bengal. Given the non-existent health care infrastructure in most of the rural areas and countryside, this is an issue requiring serious public policy concern.

Any policy response to a situation like this would obviously require examining some of the causal risk factors responsible for the poor health outcomes of the aged, especially in the form of

Table 9: Distribution of Aged By Number of Diseases: Rural and Urban (%)
1995-96

	Urban			Rural		
	No Disease	Single Disease	Multiple Diseases	No Disease	Single Disease	Multiple Diseases
Andhra Pr	33.9	29.4	36.7	24.9	30.4	44.7
Assam	19.6	30.5	49.9	23.7	27.0	49.3
Bihar	46.3	25.8	27.9	43.5	24.4	32.1
Gujrat	31.9	34.3	33.8	39.7	26.8	33.5
Karnataka	42.0	25.3	32.7	51.5	24.2	24.3
Kerala	32.2	29.1	38.7	23.9	27.5	48.5
Madhya Pr.	44.0	23.3	32.7	42.8	23.0	34.2
Maharashtra	33.5	29.8	36.6	30.9	30.6	38.4
Orissa	40.4	24.5	35.1	30.7	29.2	40.1
Punjab	36.8	23.8	39.4	31.6	29.7	38.7
Rajasthan	43.2	26.7	30.1	40.0	25.2	34.7
Tamil Nadu	36.8	27.0	36.2	39.2	24.7	36.1
Uttar Pr.	34.1	27.5	38.3	34.0	26.5	39.5
West Bengal	16.2	29.1	54.7	22.2	23.9	53.9

Source: NSS, 52nd Round (1995-96) - Report No. 446.

multiple conditions. We tried to make this investigation by using a count data model[20] and a set of household level socio-economic details from the NSS 52nd round at the all-India level. A brief specification of the model and its estimates are presented below.

Specification of the Model:

Dependent Variable

- Number of self-reported disease/s suffered by an elderly person aged 60 or more.[21]

Explanatory Variables

- Age, Age^2,

[20] Given the multiple and discrete nature of our dependent variable (i.e. the number of diseases/disabilities), a count data model was employed Both Poisson and Negative Binomial were tried. But given the relative ease with the latter, especially while analysing the health outcomes that exhibit strong linkages between previous and successive events, we decided to restrict ourselves to the Negative Binomials (a Bernoulli process). For further discussion and methodological details, see Alam 2004b'; Grootendorst, 2002; Cameron and Trivedi, 1986.

[21] A total of 8 self-reported diseases and 5 disabilities were considered by the NSS including the visual and hearing related impairments, amnesia, cough, piles, joint problems, blood pressure, heath problems, urinary problems, diabetes, and cancer.

- Sex dummy (Male = 1),
- Literacy dummy (Literate = 1),
- Drinking water dummy (Tap, Tube well & Hand Pump = 1),
- Toilet Type dummy (Flush system = 1, All others = 0),
- Household monthly consumption expenditure (HHMCE)

The estimates of the model are given in Table 10 separately for the rural and urban areas.

Table10: Results of the Count Data Regression Model: Negative Binomial
Dependent variable: Number of Diseases

Explanatory Variables	60+ Rural		60+ Urban	
	Coefficients	St. Error	Coefficients	St. Error
Constant	-5.900393	0.012076	-5.146724	0.024086
Age	0.143742*	0.00033	0.128663*	0.000666
$(Age)^2$	-0.000738*	2.26E-06	-0.000675*	4.56e-06
Sex Dummy	-0.056446*	0.00037	-0.0608274*	0.000716
Literacy Dummy	0.027533*	0.00045	-0.107109*	0.000740
Drinking water Dummy	-0.111574*	0.00038	-0.0738475*	0.001180
Type of toilet Dummy	-0.008248*	0.00226	-0.0220192*	0.000742
HHMCE	-6.21E-07*	1.40E-07	8.15E-06*	1.74E-07
Log likelihood	- 57354987		-16007593	

*****Coefficients significant at 1 percent level.

Discussion of the Results:

Clearly, the results in Table 10 indicate a strong positive correlation between the age and the risks to suffer from more number of diseases. This relationship doesn't however hold the same with the age^2 as its coefficient becomes negative. Apparently, it indicates that people are more susceptible to the risks of multiple diseases up to a certain age limit. Thereafter, these susceptibilities taper off. How far this explanation is justifiable requires sifting through the literature on human physiology and the concept of health stock in early ages. These results also suggest negative implications of poverty on health outcomes, especially in rural areas. To be precise, the better off rural elderly with higher consumption expenditure (HHMCE) are less likely to suffer from poor health outcomes and multiple diseases. This is shown by a negative but statistically significant relationship between the household's consumption expenditure (a commonly used indicator of poverty) and the number of diseases. Similar relationships exist between diseases and the public health variables represented in the model by (i) drinking water facilities, and (ii) toilet dummies. In other words, expenditure on public health and hygiene reduces the risk of aged suffering from different ailments. Literacy level may also help to bring down this significantly – especially in urban areas. Compared to the males, probabilities of females suffering from more number of diseases are higher. It indeed indicates the gender dimension of old age health, and therefore needs to be investigated at greater length.

Barring for the HHMCE surrogating the poverty level, all other variables follow a similar explanation both for the rural as well as the urban aged. The negative HHMCE drawn for the urban elderly implies that the persons with higher consumption levels are also susceptible to co-morbid conditions – perhaps owing to their unhealthy food habits and sedentary life style.

How to manage these conditions suffered by the poor and low HHMCE old? Obviously, given their poor economic conditions, declining work participation, dependencies and inadequate

flow of financial resources from siblings, this issue is going to present serious challenges for health and non-health securities of the growing number of aged in India and Pakistan. Especially, from the health security angle, two options could possibly be considered. One is to upgrade the network of existing primary health facilities with necessary medical skills to help the rural aged. Another may be to evolve a health fund to finance the old age health and long-term disability requirements. Available evidence – especially given by the pattern of public health expenditure in India during the past decade – does in no way conform to these arguments. We briefly go into this below.

6.4 Inadequate Public Health Expenditure and Declining Dependence on Public Health care Facilities

Table 11: Growth in Real Per Capita Health Expenditure: 1990-91 & 1995-96 Central Government and Major States

States	1990-91 (Rs.)	1995-96 (Rs.)	Annual Average Growth (%)
1. Andhra Pr.	34.6	83.8	19.35
2. Bihar	25.4	21.9	(-) 2.92
3. Gujrat	50.9	52.7	0.70
4. Haryana	44.1	49.8	2.46
5. Karnataka	37.1	53.0	7.39
6. Kerala	51.2	63.7	4.47
7. Madhya Pr.	30.4	31.8	0.90
8. Maharashtra	58.4	61.7	1.11
9. Orissa	33.0	48.2	7.87
10. Punjab	54.9	57.7	1.00
11. Rajasthan	63.0	58.1	(-) 1.61
12. Tamil Nadu	70.2	72.8	0.73
13. Uttar Pr.	33.1	29.4	(-) 2.34
14. West Bengal	41.6	34.4	(-) 3.73
Centre	9.2	4.7	(-) 12.57

Source: National Sample Survey, 52nd Round (1995-96) - Report No. 446.

Table 11 shows that several states including Bihar, Rajasthan, Uttar Pradesh and West Bengal, etc., have actually slashed their health expenditure in real terms during the period under reference. Even the real health expenditure of the central government has declined over these years significantly in per capita terms. The remaining states have however raised their health budget, a few of them like Andhra Pradesh, Karnataka and Orissa quite significantly. And yet, there appears to be a growing

Table 12: Share of Public & Private sectors in Hospitalized Treatment: (%)

Hospital Type	RURAL		URBAN	
Government	1986-87	1995-96	1986-87	1995-96
Hospital	55.4	39.9	59.5	41.8
PHC/CHC	4.3	4.8	0.8	0.9
Pub. Dispensaries	-	0.5	-	0.4
Non Govt.				
Private Hospital	32.0	41.9	29.6	41.0
Nursing Home	4.9	8.0	7.0	11.1
Charity Institutions	1.7	4.0	1.9	4.2
Others	1.7	0.08	1.2	0.6

Source: NSS 52nd Round (1995-96), Report No. 441, November 1998, p. 28.

dependence on private facilities by the users of health care services. This can clearly by noted from Table 12 that shows a substantial decline in utilization of public facilities over the reference period. This table specifically suggests a substantial reduction in demand for hospital services run by the government - apparently on quality considerations, moonlighting by doctors and so on.

A number of questions follow from this entire discussion – particularly regarding the measures to provide certain minimum health and livelihood facilities for a large and fast growing segment of elderly population in both the countries. Unfortunately, an active consideration relating to most of these issues is largely missing. No wonder then that a situation like this may act to bring about certain mismatch between the economic and demographic realities of the countries like India and Pakistan.

7. Concluding Observations

Given the preceding details, replete with serious health and livelihood issues for aged, it is clear that India – and for that matter Pakistan as well- is currently without specific ideas at the policy level to meet the growing pressure of changes in age composition with faster growth of: (i) the young (i.e., 25+), and (ii) the old (i.e., 60+/75+) populations. While the growth in former age category would require a matching improvement in work opportunities, the latter may demand for health and social security provisioning. Unfortunately, however, we foresee an increasing mismatch between the two sets of demands, and hence lack of income or health security for the more vulnerable segments population including the aged. To be precise, a mismatch between the employment opportunities and annual increments in labour force may cause serious labour market issues - leading to growing informalization of employment and poor compliance of labour laws. To some, it may also lead to exclusions of low-income population in a pro-market economic dispensation. Or, to put it differently, the wages or income drawn by a large segment of labour employed on contractual basis in unorganized sectors may find it difficult to cope up with the market determined prices of major services including the health and diagnostic care. It may also affect familial transfers to the ageing dependents. The paper, therefore, progresses on the basic argument that liberalized economic regimes in India and Pakistan do not take many of these issues in their proper perspective. It is further argued that an oversight of these issues may have social cost.

Admittedly, to plan for the growing demand for social and health security requirements of the ageing population hinges on the constrained fiscal situation of these two poverty ridden South Asian countries. Nevertheless, these issues can no longer be ignored, and appropriate instruments will have to be created – especially to minimize the risks of any major economic-demographic incongruities in these countries. This may, *inter alia*, require the following:

- Attempts will have to be made to generate information regarding ageing and its attendant issues including the old age poverty and growing slippage in inter-generational transfers,

- On the health front, the large network of primary and community health centers in both the countries may be revamped with additional facilities to provide basic health services to the needy - especially to the aged. This however requires a change in public perceptions with attempts to include a few geriatric conditions as part of the basic health care. Two major policy documents in India – namely, the National Policy on Older Persons (NPOP, 1999), and the National Population Policy (2000) – endorse the need for such initiatives.

- Expenditure compression on health services negates the significance of the health security issues. The process has to be reversed as suggested in the recently concluded report of the National Commission on Macroeconomics and Health in India. Attempts may also be made to improve the service quality in government hospitals and health care facilities,

- A complete reliance on families to provide care for the older persons may not work because of serious poverty issues and jobless growth in both the countries. Governments in both the countries will have to chip in with appropriate financing mechanism like cess on selected industries and ventures,

- Attempts may nevertheless be made to strengthen the family system by allowing rebate in personal taxations to those supporting the aged. This issue draws greater significance in the light of the growing break down in joint family system during the recent past.

- Create assured and stable savings instruments for the old age income security - especially for self-employed or people engaged in unorganized informal economic activities. Tax sheltered retirement accounts may also be devised,

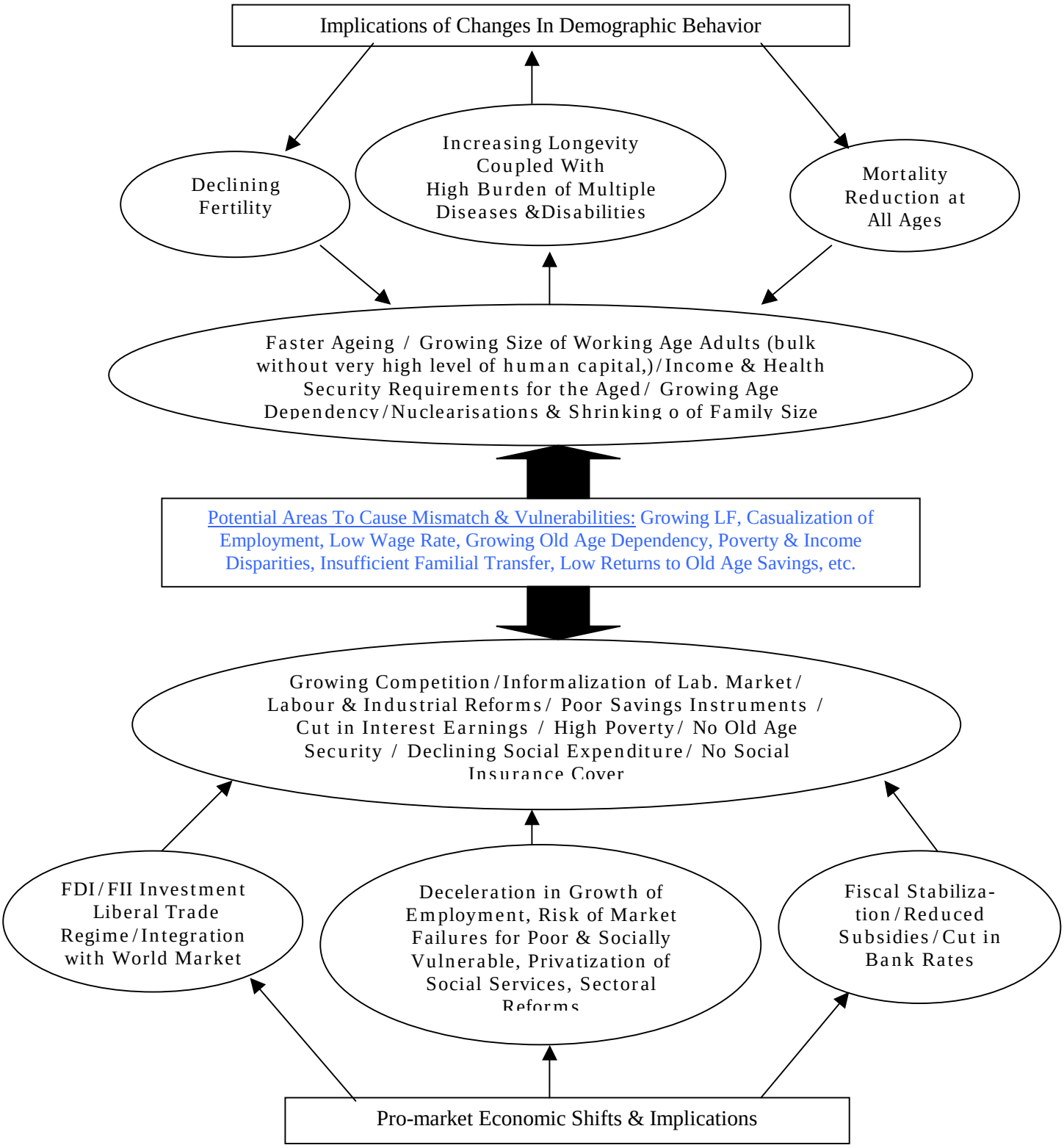
- Poor management of retirement funds by the public financial institutions need to be addressed,

- A social health insurance policy may be evolved with the help of finances generated through diverse sources including taxes or cess on all health hazardous industries, pay-role-tax, employers' contributions, public transfers, and

- Pakistan needs to draw a clear-cut strategy on its ageing population.

- Political economy of ageing needs to be strengthened to ensure the elderly welfare.

Appendix 1: Factors In Economic-Demographic (E-D) Mismatch:
A Hypothetical Diagram



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