Is Pension an Effective and Adequate Solution to the Challenges of Ageing?

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Reduced mortality rates coupled with the decrease in fertility rates are causing demographic shifts in population across the globe. Average life expectancy has improved due to impressive advances in medical science and advanced health care. This has triggered the need for pension reforms across the globe. Governments are trying their best to enhance the effectiveness of social security schemes. Multi-lateral organizations have advocated the principle of active ageing to ensure that the elderly population is not socially discriminated against and is given opportunities to continue to contribute to society. There is a need to create greater awareness about holistic health management right from a young age. Several academic experts have recommended the extending of the retirement age and increasing the ratio of women work force in the job market as a solution to address the increase in dependency ratio. India's geographical diversity makes it more complex to arrive at a universal solution to address the challenges of providing social security to an ageing population. There is a need to look at other avenues to ensure that the elderly lead a life of dignity post-retirement. For instance, there is a need to align pension and health care schemes to meet the needs of an ageing population. This paper explores the benefits of supplementing pension schemes with other financial instruments to deal with the challenges of population ageing.

Keywords : Pension reforms, Population ageing, Active ageing, Retirement income, Pension regulator, Social security schemes

Introduction

Population ageing has become an irreversible global reality that can affect the future generations. World Health Organization (WHO) identifies population ageing as the phenomenon by which the number of older persons is increasing nationally and globally. These demographic shifts impact societies, communities, global institutions, development efforts and international relations. However, this phenomenon is not uniform across countries.

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As per the World Health Organization estimates, the number of people aged 65 or older across the world is expected to grow to nearly 1.5 billion by the year 2050 (as against the figure of 524 million in 2010). In 2015, the WHO published a report that highlighted the need for identifying ageing as the process of developing and maintaining the functional ability to promote the wellbeing in older age. Functional ability is the interaction of an individual's intrinsic capacity to cope with the ever-changing external world.

Demographic shifts and advances in medical technologies have resulted in population ageing adversely affecting the fiscal and macro-economic stability of nations. Population ageing can lower labor force availability and savings rates. If a government has to spend more on pensions and health care for the ageing population, this will reduce the resources available for education and infrastructure. On the other hand, dual incomes, decreased fertility rates and birth control measures have led to a decline in population growth. Policy interventions like extending the retirement age and increasing the participation of female labor force can provide some relief.

Ageing-related research in low and middle income countries is of greater interest because this is an area that has received insufficient attention in literature.

A well-developed pension system can generate income security for the ageing population. It can also provide funds for developing viable sectors of the economy. Funds can be made available for the capital market. This will not only reduce fiscal burden but also combine the long-term saving options with longer-term investments.

The challenge lies in increasing the real value of pension income. Healthier lifestyles and preventive care can enable better control of health care expenses during the post-retirement phase of an individual's life span.

This study explores the demographic shifts in population and has attempted to capture the trend of population ageing across the world. The existing pension schemes have been reviewed, a comparison has been drawn between the pension schemes across the world and a roadmap has been laid out to deal better with the challenges of ageing population through innovative financial instruments.

Population Ageing

Demographic changes can impact age structure and size of the populations (Marier, 2008). Older people can be valuable economic and social resources – yet they need healthcare and social support to sustain themselves. The needs and aspirations of older people will need the formulation of a comprehensive public health policy (Beard & Bloom, 2015).

In the 80s, Amartya Sen and Martha Nussbaum introduced the 'capabilities approach'. The core focus of this approach is on identifying what the elderly individuals are still capable of doing in and for the society. This theory lays emphasis on functional capabilities (example – ability to live happy and lead healthy life in old age by engaging in economic transactions) and how they can still achieve the objectives that they had valued and cherished most, based on their capabilities. A person's wellbeing and quality of life should be evaluated according to what they are practically capable of being and doing things that they value, in their context of daily living. Society should appreciate and encourage the human freedom.

The Second World Assembly on Ageing was held in April 2002 at Madrid, Spain. A large number of government officials assembled there to discuss and review the opportunities and challenges of population ageing in the 21st century. There was a clear need for cross-national (and international) collaboration to deal with the challenges presented by the population ageing reality (Zaidi, 2008). The identified challenges will need governments to introduce innovations through public-private participation. The United Nations has thought out action plans to understand these challenges in a structured manner. A contrarian approach to population ageing is one that considers this phenomenon as an achievement of societies (guided or controlled growth of advanced health care) and not as a potential disaster (Zaidi, 2008).

The reality of population ageing is expected to spread across the globe between 2015 and 2030. Earlier, people over 60 years of age comprised 8-10 per cent of the population. Now (in 2020) this figure has swelled to 22 per cent. People who are entering the 60+ age bracket are healthier than the previous generation - however this development cannot be generalized across all the nations (Bloom, Chatterji *et al*., 2015).

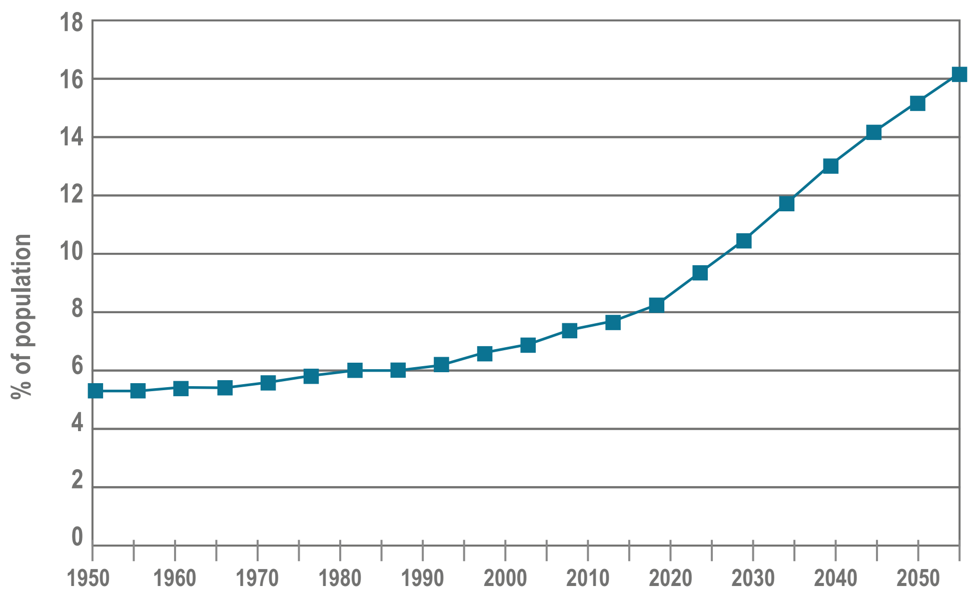
The percentage of older people increasing means the younger generation has to support a larger number of retirees making the inter-generational risk sharing a challenge (Zaidi, 2008; Bonenkamp *et al*., 2017). Older people should not be considered a burden (Zaidi, 2008) just because they have health issues. This should be the real reason for a greater need for inter-generational social cohesion because they have already contributed their mite to the society according to their abilities.

Pension policies introduced by governments are largely a reflection of the pattern of population ageing and the existing institutional frameworks (Marier, 2008). Policy decisions must therefore be arrived at after a clear understanding of social and inter-generational dynamics. Government policies must target the well-being of older people through options to improve health, long-term care and welfare systems. Policy development on ageing is often difficult because the variations in function associated with ageing are not well-articulated leading to inter-individual variability. This is why policies need to be considered differently for sub-populations among the elderly (Beard & Bloom, 2015).

A 2008 report by the United Nations had claimed that the world population would reach 7 billion in 2012 and surpass 9 billion people by 2050. The population of developing nations is expected to rise to 7.9 billion by 2050. The population of developed nations is not expected to change much. In the absence of migration of population from developing to developed nations, it is projected that there would be a decline in the population of developed nations.

The composition of the typical households is changing. Generational gaps are widening leading to a gap in fulfilling the obligations and responsibilities of younger members of the family towards the older generation. At the same time, it cannot be denied that elderly citizens can be demanding, adamant, cantankerous, recalcitrant and cause enormous stress to the younger generation. Spatial mobility is on the rise now.

The family structure has changed in such a way that, in many nations, the older people are increasingly living alone. Multi-generational households are now a rarity. The fact that older people refuse to adapt themselves to the changes in the tech-driven socio-economic environment further compounds the complexity. Older people with functional decline are difficult to manage. The situation gets exacerbated if their children live far away from their places of residence, worse still, or if the children have migrated to foreign shores (Beard & Bloom, 2015).



Source: commons.wikimedia.org/wiki/File:Percentage_of_the_World_Population_Over_65_-_ 1950-2050.png
Reference: DESA, U. (2008). World Population Prospects.

In the European nations, nearly 50 percent of the women aged 65 or more live all alone. Some of them face risks of isolation which eventually leading to depression and develop suicidal tendencies (Beard & Bloom, 2015).

Creating awareness about preventive health care is as crucial as offering better emergency health care for geriatrics. Promotion of self-care, improved hospital management practices that are agefriendly and disabled are needed along with pension schemes. As part of long-term care, preventive measures need to be emphasized and greater awareness must be created about the need for healthy lifestyles so that there is improvement in the functional mobility at a later stage in people's lives. A healthy lifestyle in the earlier stages of one's life can add more years of life and good status of health as one progresses in age (Rechel, Grundy, Robine *et al*., 2013; Zaidi, 2008). Pension amounts have to be adequate to provide for a decent living standard to the ageing population and there is also the need for supplementing it with innovative methods of increasing the income, if required.

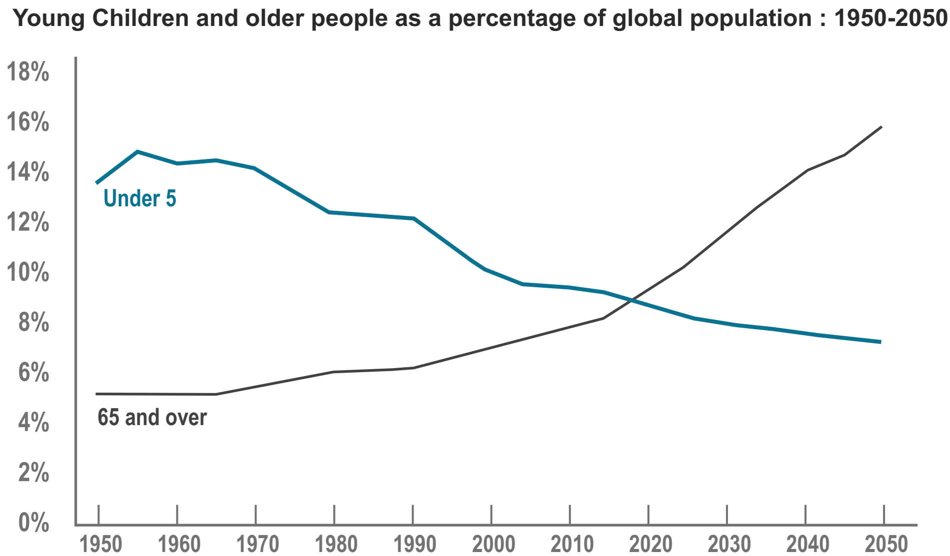
The role of the state and family support in providing care for older people has now become the subject of global debates. In some cultures, women who don't get an opportunity to engage as a formal workforce member are at a greater risk of poverty, abuse, neglect and poor health in their older age. They may have to be content with limited access to quality-health care, social-care services, and insufficient pension. This is why it is essential to encourage women to pursue employment opportunities. There is however a drawback – women may not be able to spend sufficient time at home to offer informal care to the elderly. This demands a balance in the role of family and government (Beard & Bloom, 2015).

Concerns exist about old-age dependency even in South East Asia (Geietel-Basten *et al*., 2015). Extension of working period beyond the statutory retirement age is now the norm due to the increase in life expectancy (Grady, 2016).

Zaidi and Howse (2017) have delineated the different perspectives of ageing as given below:

- 1940s-60s - ageing was considered a social problem due to individual's dependency in old age.
- 1970s-1980s - ageing was considered more of an employment-related issue; this promoted the notion that ageing is about positive experiences in later life rather than about disease and decay.
- 1990s onwards - society recognized that ageing as a global phenomenon so that experiences and best practices across the world could be shared.

In March 2016 the US Census Bureau issued the report: "An Aging World: 2015", which predicted that the world's older population will grow and outpace the younger population in the next 35 years (see the chart above). Low fertility levels and increased life expectancy would drive the population ageing process. The share of working-age population will decrease marginally during the next decades across the globe (Goodkind *et al*., 2016).



Source: Syed, N. (2017) (https://www.census.gov/library/publications/2016/demo/P95-16-1.html)

A paradigm shift is needed in 'thinking' about ageing by 'shouldering' the challenge as an opportunity. The World Economic Forum (WEF) has proposed an alternative mindset to deal with the challenges of ageing. These alternatives (Refer Table 1 on next page) are categorized under three domains, namely: 1. Population Ageing, 2. Work and 3. Solutions. Population ageing is not merely a challenge - it is also a golden opportunity. An ageing population presents challenges like evolving a robust mechanism for sustainable pension funds, health-care financing and exploring ways and means to reducing the increased burden on governments. Moreover, older people are experienced and their wisdom can be leveraged and channelized to boost productivity through their involvement in training the younger generation of workers. The WEF also highlights the need for this change to become transformational through integration of pension and health-care financing schemes.

In European countries, the present number of 85 million people aged 65 or more is expected to reach 151 million in 2060. Though the retirement age of industrial workers in national pension schemes is rising, this can lead to productivity declining. Ergonomic investments in the workplace can be used to improve productivity of an ageing workforce (Bogataj *et al.*, 2019).

Some older people fortunately do not experience any major health issues - lifestyle modifications like regular exercise and proper dietary habits do contribute to the healthy life span of an individual. Increased use of electronic health records and allied studies can enable managing the challenges of ageing better (Partridge *et al.*, 2018).

Table 1: Changing Mindsets about Population Ageing

Domain	Conventional mindset	Alternative mindset	Remarks	Remarks
Population ageing	Ageing of societies is a challenge; Older workers are less productive	Ageing of societies is both a challenge and an opportunity; Older workers are productive		
	Ample time exists to solve pension and health care financing challenges	Time to address pension and health care financing challenges is fast running out		
Work	An individual's career ends with retirement	Work in old age can be fulfilling and rewarding	A flexible working pattern can be organized for senior citizens	Work, rewards and career progression can be adjusted to various life stages
Solutions	Change must be incremental; Health care is curative and reactive; Pension and health care solutions can be siloed	Change - transformational; Health care is preventive and proactive; Integrated pension and health care financing challenges		

Source: www.effo.gov.hk

Objections could be raised if the age of accessing pension is increased. Though there are people who are willing and able to work beyond their retirement age, employers may project negative attitudes to such policy interventions. Without addressing these issues, if the age limit for accessing pension is increased, then the proposal could end up in weakening the financial safety net for those who are unable to find a suitable source of employment after retirement (Beard & Bloom, 2015).

Individuals seldom think about retirement or feel the need for pensions after retirement until they reach their forties. Paying off liabilities like a home loan may be given greater priority. Lack of awareness can precipitate wrong financial decisions by individuals (Foster, 2018).

Developing countries are discussing ways to achieve both universal pension coverage and adequate incomes in old age - some nations have explored the possibility of expansion of contributory social pensions financed through payroll taxes. Other nations have financed pensions using government revenues. These tentative solutions are needed because only 48% of world's elderly population has access to pension (Kidd, 2015).

Most countries have a three-tiered pension system - the first tier is a basic scheme for the poor funded by the government; the second tier is for those who are employed and the third tier pension is voluntary and designed for those with higher incomes who wish to invest more and earn higher pension income in their old age.

Population ageing will increase government spending on pensions and health care leading to increase in budget deficit. This will necessitate the government having to borrow from the private sector or increase interest rates to motivate people to invest in bank deposits. But this will increase the lending rates to corporates. Let us glance at some of the policy measures to deal with the problem of population ageing in a tabulated format.

Table 2: Policies to Deal with Ageing Population

Sr No.	Policy	Positive Impact	Negative Impact
1	Increasing the retirement age (from 60 to 65 or 70).	More tax revenue. Greater consumer spending. Increase in supply of labor.	Manual labor in old age may be difficult. Drop in productivity. Can affect employment opportunities for younger generation. Health issues in old age may be a challenge for all the elderly people to work. There may be affluent senior citizens who may not need any employment post-retirement. This cannot be a universal solution. Delay access to pension schemes upto a particular age. Pension schemes must be age-dependent, not retirement-dependent.
2	Increase income tax	Tax revenues to pay for higher pension bill	The government may find it difficult to justify.
3	Means-tested pensions	Pension targeted at low income population not having a private pension. This can reduce inequality and the cost of pensions.	People won't save and/or invest in private pension schemes in order to avail benefits from government pension schemes.

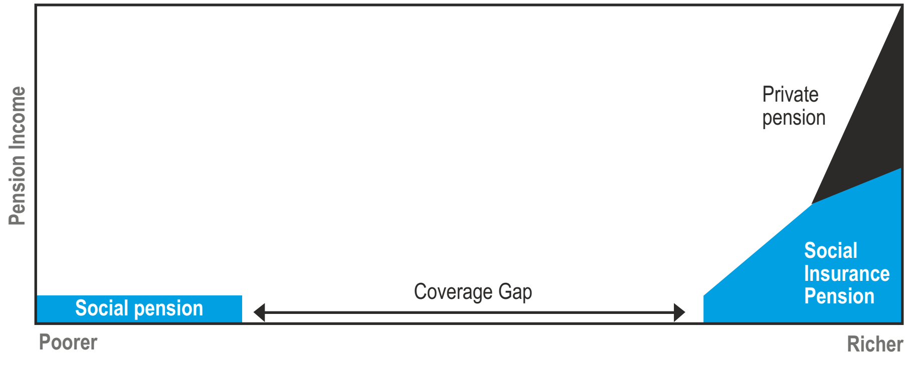
4	Encourage private pensions	Firms can be asked to provide private pension by governments.	Tax breaks for private pensions. Private pensions may be insufficient for some people.
5	Encourage immigration	This is intended to reduce the dependency ratio and lead to higher tax revenues. Immigrants would not be entitled to pension benefits	This could lead to social unrest among the local population.

Source : https://econ.economicshelp.org/2007/06/how-to-deal-with-ageing-population.html

Impacts of Ageing Population

An ageing population can lead to an increase in the dependency ratio. More people would claim pension benefits while fewer people would be working and paying (higher) income taxes. Increased government spending on health care and pensions could lead to an increase in tax rates. Shortage of workers could lead to increase in the cost of labour. In a developing economy like India, retirement homes are increasing and in demand.

In the Western economies, older and wealthier persons are covered by contributory pension schemes. Means-tested, tax-linked finance schemes provide support to those older people who are impoverished. Means-tested pension schemes are those that are based on the income or assets of an individual. This leaves the other category of elderly citizens in the middle without a minimum income guarantee - especially in those nations where there is significant informal employment. Older people living above the poverty line need to continue to work even in old age or become family-dependent for their financial needs.



Source : Kidd (2015)

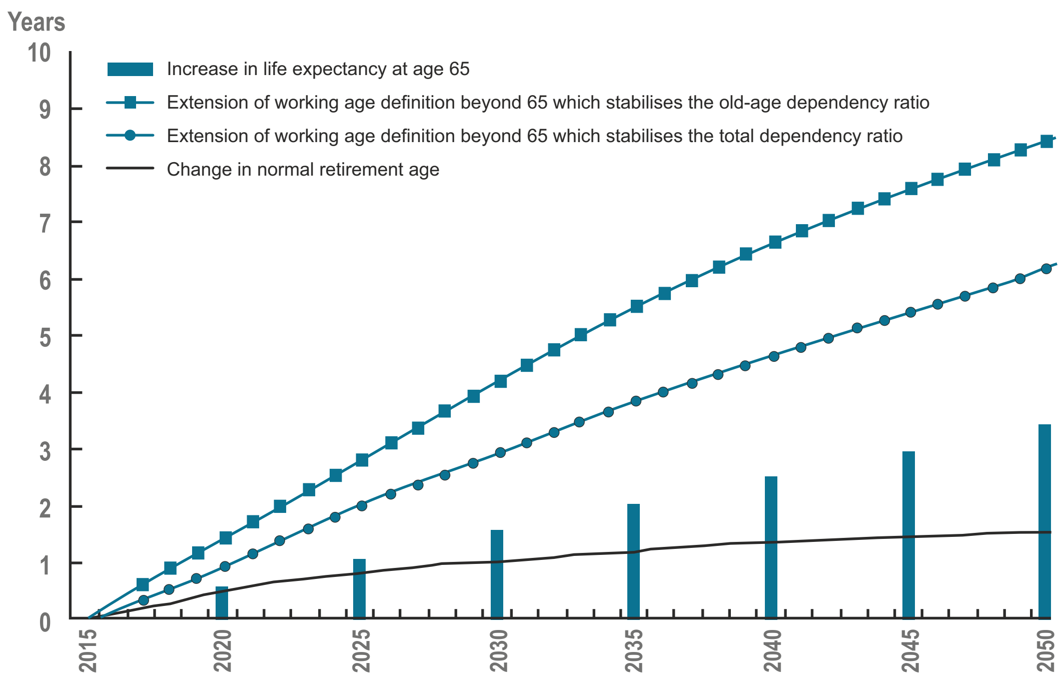
Zero Pillar pensions are means-tested pensions targeted at older people - the design of these schemes is far from adequate. Coverage gap exists in means-tested Tier 1 schemes. Individuals who are poor and those who work in the formal sectors are covered through pension schemes leaving out a larger number of elderly people in the middle of the income spectrum. These individuals have to continue working in old age also or rely on others as dependents for financial support. It is this section of population in the middle that is deprived of the benefits of income security (Kidd, 2015).

Ironically, the post-retirement condition of every individual is not the same. Some people may suffer from health ailments while others may enjoy a healthy life. Pensioners can help their children and even grandchildren as witnessed in South Africa and Brazil, leading to improved family relations. In this case, the pensioners were financially independent (due to the pension received) and also support their families leading to overall harmony. They also availed the support services thus increasing the employment opportunities in the economy. But for those pensioners who suffer from debilitating or chronic ailments during old age, the pension amounts may be inadequate. In India many joint families have given way to nuclear families causing hardships to the elderly parents and relatives.

Children may be employed and live far away from their parents and not all of them may be able (or willing) to support their parents financially due to the nature of their job and income resources. For example, one cannot compare the salary drawn by a lecturer with that of an IT engineer working in the software industry. Thus, if pensioners receive an amount that is less than what they actually need, they may be placed in a difficult situation. There are households where both the husband and wife may be earning pension, thus reducing the financial burden on their children. So, a universal pension scheme need not benefit or suit everyone equally. Employees who have worked in PSUs and other government organizations are entitled to pension from the government in addition to what is recommended by statute. Employees in the private sector, in comparison, receive pension amounts that are lesser than those in government service. Disparities are glaring in pension benefits across employment, organizations and schemes.

Equity as a fundamental principle of pension programs represents the need for any insured person to be aware of the amount that has been earmarked for pensions and the benefits accruing from his/her contribution. To put it simply, people who have contributed to pension schemes must receive benefits commensurate with their contributions (Gruat, 1998). This is how a social insurance scheme differs from social assistance. In the latter case, individuals are beneficiaries of government's social security efforts without giving any contribution on their part.

Pension reforms are needed to ensure sustainability of pay-as-you-go schemes. Reforms need alignment with behavioral changes of individual actors to extend working lives. Elimination of provisions that subsidize early shift of an individual from working life to a retired life is a debatable topic. Older workers must be treated as human capital. People must be amenable to take up different jobs even after their official retirement.



Source: https://www.oecd.org/general/ageingsocietiesandtheloomingpensioncrisis.htm

The above chart clearly depicts the changes needed to improve the dependency ratio and the need to revise the retirement age.

Ageing Theories

Rowe and Kahn (1987) defined successful ageing as the process in which there are no illnesses and disabilities and where elderly are able to function normally and can take part in social activities.

1. ***Disengagement Theory*** was proposed by Cumming and Henry in 1961. As people age, they slowly start disengaging themselves from society. This benefits the ageing individuals and society. Individuals are given the space to deal with their own future. As social identity is related to employment status, the loss of roles and responsibilities due to ageing and retirement poses a greater psychological challenge for men than women since the latter are (or were) considered to be more oriented towards family life. This theory however is no longer accepted because it is out of sync with the times. Women now enjoy as much financial freedom as men in most societies. The post-retirement phase may not be the same for all individuals. The theory is criticized for its over-emphasis on social structuring.

2. ***Activity Theory*** was proposed by Havighurst in 1963. Activity and satisfaction with life enjoy a positive relationship. Loss of activity leads to lower satisfaction with life. Older people should remain active by finding alternate career paths or invest time in taking up interesting, and if possible, productive activities in order to keep themselves occupied (for example, societal development work).

3. ***The Productive Ageing Theory*** was proposed by Butler and Gleason in the 1980s that recommended participation of older people in the labor force for as long as possible.

In the 1940's, pension schemes were devised to deal with age-related losses but as population began ageing, efforts were initiated to encourage older people enjoy their social life to the full so that this in itself could delay the onset of age-related health problems (Zaidi & Howse, 2017). Loneliness can be a killer. So, a socially active life can keep diseases at bay, it is presumed. This is why retirement is considered as the beginning of another phase in life – the golden period of life – and not as something that needs to be dreaded. Healthy ageing, as recommended by WHO in 2015, is all about maintaining one's functional well-being as one advances in age.

Active Ageing

During the last two decades the WHO has been popularizing the notion of active ageing. This move coincided with the efforts of nations across the globe to restructure their old age income security systems.

Active ageing strategy, intended to mitigate the challenges of population ageing, is promoted by a caring society that is inclusive. Harmony and partnership between society, citizens and voluntary groups result in overall well-being of the population (Foster & Walker, 2013).

The basic principles of active ageing are:

1. Respect the rights of older people.
2. Ensure the health and well-being of the ageing population in order to minimize demands on social-care systems.
3. Prolong the retirement age to reduce the pension costs.
4. Enable older people to participate in community and political activities.

Thus the solutions to ageing challenges suggested are postponing retirement, prolonging employment period and ensuring active participation of the elderly in society (Foster, 2018).

Though the population is ageing world over, the desire for enhancing the quality of life and availability of advances in health care have increased the longevity of the people. This has also presented significant economic and social challenges. Australia has encouraged people to stay in the labor force beyond the retirement age by increasing the age for pension eligibility. Active ageing is being promoted in Australia as this can contribute to society and its well-being (Zaidi, 2008; O'Loughlin *et al*., 2017).

Advances in medical science will ensure that people will live longer and healthier too. The National Innovation Centre for Ageing has been set up in the UK, funded by the British Government along with Newcastle University. The Centre carries out research on products that can promote healthy ageing. It also facilitates active ageing with working practices adapted as per the employee's age.

Active ageing advocates active participation of the elderly in employment opportunities as well as opportunities for social engagement so that their capabilities, experience, expertise and wisdom can be taken advantage of by the society. Ageing communities need to become more resilient and effectively deal with the economic and social impact of the demographic shifts in population.

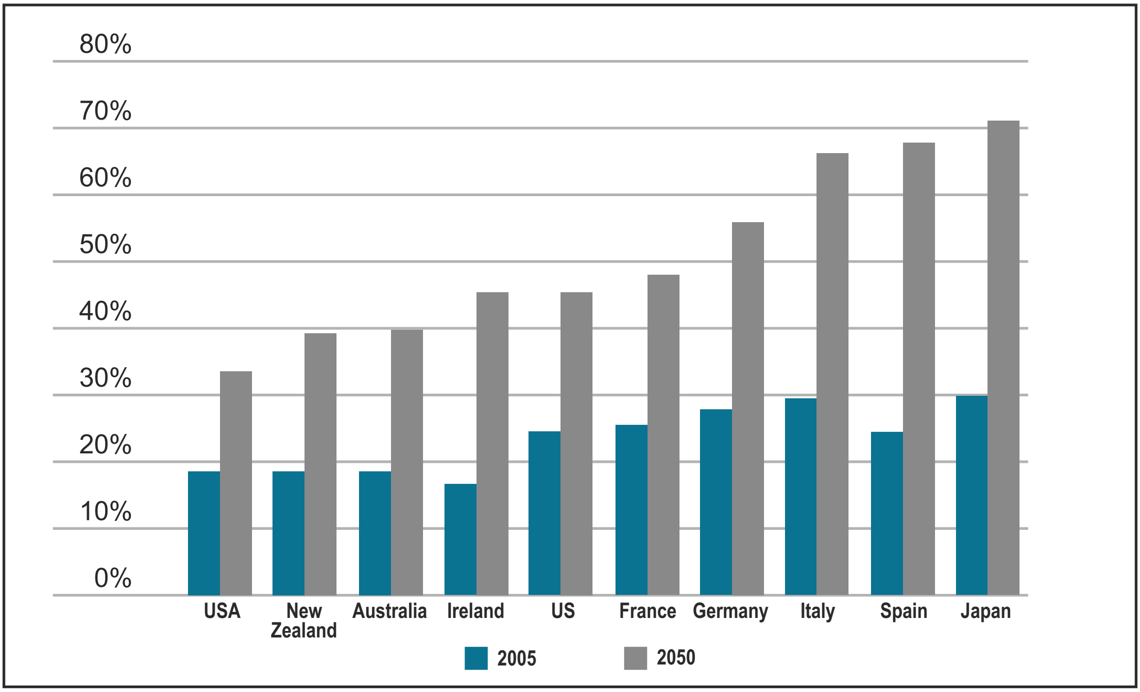
Active ageing can be considered as one of the solutions to deal with challenges of population ageing wherein retirement phase can be supported and generate greater financial security (Foster, 2018). "Activity" indicates all the pursuits of an individual that are meaningful to his/her well-being and that of the family. Extending the working life or delaying the age at which pensions can be released is not the only solution to the problems of population ageing. Pension policies must be aligned with the various aspects and phases of active ageing.

The World Health Organization claims that active ageing is about optimizing opportunities for health, participation and security of the people so that the quality of life of the elderly can be maintained and also improved.

Drawbacks of Active Ageing Concept

While the concept of active ageing does look promising on paper, there are limitations associated with it. For instance, elderly couples who are living all alone with their children staying outside the state or outside the country face numerous challenges. When one of the partners (husband or wife) falls sick, the onus to take care of the partner falls on the other spouse. This limits their social interactions and participation in community activities. Old-age homes have mushroomed in India in places like Bangalore and Coimbatore but these are exorbitantly priced and may not be economically viable for all the pensioners. The government needs to encourage entrepreneurship and make arrangements for medical diagnostic facilities and in setting up hospitals exclusively dedicated to the elderly population. Dedicated health-care centers for pensioners subsidized by government can also provide better access to health care for the elderly population.

Forecast for Dependency Ratios in Different Countries



Source: Department for Work and Pensions :
(https://www.economicshelp.org/blog/8950/society/impact-ageing-population-economy/)

The dependency rate is the ratio of the young and old population to the working-age population. It is also defined as the ratio between the population that does not participate in labor force and the actual working population (Kleiman, 1967). It refers to the burden caused by non-working people on a nation's working-age population. The burden is greater if the dependency ratio is higher. From the graph above, it is clear that the dependency ratios are increasing on account of the ageing population.

India's Ageing Population

India is expected to become the most populous nation in the next 7 years with nearly 20% of her population comprising those who are 60 years and above by 2050. Projections by the UN and Help Age indicate that the 60+ population in India will increase to roughly 32 crore by 2050. The Government of India has estimated this figure to be 34 crore.

The 2018-19 economic survey revealed that India has witnessed a sharp reduction in population growth. India's population growth is expected to further decline by less than 1 per cent between 2021 and 2031 and under 0.5% during 2031-41. Germany and France have reported similar trends.

India's population is over 1.3 billion. (World Bank, 2018) and half of this is below 25 years of age. Consumption patterns of the younger population have attracted retailers and technology giants from across the globe to the emerging economy of India. Interestingly, the ageing phenomenon is acute in the Southern states, Himachal Pradesh, Punjab, West Bengal and Maharashtra. The share of population over the age of 60 would increase from 8 per cent in 2015 to 19 per cent by 2050 [Estimates by United Nations Population Fund (UNFPA)].

In 1951, India had 19.8 million elderly persons. This increased to 76 million in 2001 and 103.8 million in 2011. The population above 60 years of age is projected to increase to 143 million in 2021 and 173 million in 2026. PFRDA estimates that this would increase from 8.9 per cent (2019) to 19.4 percent (2050). The population of those above 80 years of age will increase to 2.8 per cent by 2050 from 0.9 per cent in 2019.

A State Bank of India research claims that India's demographic dividend (now considered as its strength) can actually end up as a drawback by the year 2030. (The New Indian Express, June 14, 2018). Despite better access to health care and increased awareness about fertility issues, total fertility rate in India has been declining sharply since the mid-80s.

The Total Fertility Rate (TFR), which was 4.5 in 1984 has declined to 2.3 in 2016. The age group of 1 to-19 years is expected to reduce to 25 per cent by 2041 from 41 per cent in 2011, and also the working-age population (20-60 years) will reach 59 per cent by 2041. This employable-age population, as per estimates, will grow by roughly 9.7 million per year during 2021-31 and drop to 4.2 million per year between 2031 and 2041. Additional job takers will then be needed! Thus, the Indian authorities will be required to focus their efforts towards improving the health care systems of the elderly and the option of increasing the retirement age in a phased manner.

Table 3: Life Expectancy in India (years)

2050	74.91	2000	62.28
2020	69.73	1995	60.06
2019	69.50	1990	57.66
2018	69.27	1989	57. 18
2017	68.97	1980	53.47
2016	68.67	1975	50.63
2015	68.37	1970	47.41
2010	66.43	1960	41.13
2005	64.31	1950	35.21

Source: www.macrotrends.net/countries/IND/India/life-expectancy

History of Pension Schemes in India

Milestones

- 1857 - Launch of pension schemes
- The Indian Pension Act, 1857, replaced by the Indian Pension Act, 1871
- Introduction of Dearness Allowance
- 1881 - Pension provided to government employees by order of the Royal Commission on Civil Establishments
- 1919 & 1935 - Further provisions by the Government of India; Extension of retirement benefit schemes to the entire working population in public sector
- Post-1947 - Provident fund schemes launched for employees in private sector

A paper released by the Asian Development Bank had mentioned about the dilution of demographic dividend since the proportion of greying population kept growing (Park, 2009). The absence of a mature pension system exacerbates the problems of ageing.

People working in the informal sectors do not have any organized access to pension schemes and this is a yawning gap in India's social security schemes.

- Mid 90's - Part of the employees' Provident Fund scheme was converted into a defined benefit scheme.

Introduction of National Pension Scheme

- January 2000 - Report by the Oasis Committee recommended the portable individual retirement accounts, across the counter service delivery platforms, centralized record keeping, extensive use of information technology, competing pension fund managers. The Committee also suggested that the government pension liabilities must be funded out of contributions made by government employees.
- 2003 - Introduction of the New Pension Scheme (transition from defined benefit to defined contribution schemes).
- December 2003 - Setting up of the Pension Fund Regulatory and Development Authority.
- January 1, 2004 - All government employees were covered under the new NPS which was extended to all the citizens in May 2009.
- Provision was made for a monthly pension of 30 per cent to the poorest among the elderly.
- The Government of India introduced the old age poverty alleviation program called National Old Age Pension Scheme.

- 2018 - The Supreme Court of India ruled that pensions for the elderly must be realistic.
- 2019 - Launch of the Pradhan Mantri Shram Yogi Maan-Dhan which (assured a pension of Rs. 3000 per month to workers in the unorganized sectors)

The Three Pillars of Pension Schemes

Saving for retirement is an important financial goal for every individual. But not many individuals pay attention to this because they feel that retirement is many years away, and that retirement planning need not be prioritized immediately. Other individuals believe that the Employee Provident Fund is enough to take care of their retirement needs. But this is a pipe dream. It is very important that all individuals understand the three pillars of a pension system.

1. The first pillar is a social insurance scheme that is financed by the Government. Example – Indira Gandhi National Old Age Pension Scheme for older population below the poverty line.
2. The second pillar provides occupational pension to salaried class. In 2004, the Indian government changed the Defined Benefit Scheme (DBS) to Defined Contribution Scheme (DCS).
3. The third pillar caters to voluntary investments by individuals in pension schemes. This 'Pillar' is important for employees in the unorganized sectors as well as the salaried class due to the fact that increased life expectancy will render the pension amount to be inadequate due mainly to the inflationary pressures.

A CRISIL report titled, 'Financial Security for India's Elderly' has highlighted the impact of increasing life expectancy. In this report, the Chairman of PFRDA (Pension Fund & Regulatory Development Authority) has stated that India will make a transition from a 'young' to a "greying" country.

Persons above the age of 60 would increase from 8.9 per cent of the population now to 19.4 percent by 2050. The trend of decrease in inter-generational support within families points to the need for a well-thought-out and funded and self-sustaining pension system in India.

Table 4: The Pillars of a Pension System

Pillar 1	• State-funded pension plans • Poverty alleviation programs by government - targeted for the elderly • Pay-As-You-Go: Current revenues to meet current expenditures • Taxes paid by present generation to pay pension liabilities of earlier generation. • Defined-benefit schemes for civil services

Pillar 2	• Mandatory savings at employment level : publicly or privately managed • Benefits only to contributors • Employees Provident Fund • Employee Pension Scheme
Pillar 3	• Voluntary savings : PPF, NPS

Different Types of Pension Schemes in India

- In 'Defined Contribution Plans, the pension benefits depend on the level of savings accumulated by the pensioner. Therefore, the amount of pension depends on the value of the contributions made. National Pension Scheme is an example of defined contributions scheme.
- Defined Benefit plans provide the minimum income guarantee. Hence, the size of the pension is based on worker's wage history and length of service.

Pension Schemes across the Globe

The Old Age Pensions Act, 1890, was considered inadequate and so, after the Second World War, a flat rate of pension was introduced in the UK along with an occupational pension for those who could afford it (Foster, 2018). Perception about aging began changing in the 70's with individuals becoming accountable for pension subscriptions. This paved the path for auto-enrolment in pension schemes and also the launch of private pension schemes. Rising life expectancy and dip in fertility rates in Europe have highlighted the necessity of innovative retirement income solutions (Zaidi, 2008). The inevitability of ageing and its realization resulted in the British Government raising the state-pension age and in allowing the entry of young immigrant workers from abroad. Deferring retirement options and improvement in fertility rates can salvage the situation to some extent (Blake & Mayhew, 2006).

Some developing nations have managed to cover a majority of the population through contributory pension schemes. In Brazil, 61 per cent of the persons above the statutory retirement age are legally covered by mandatory contributory pensions and 39 per cent are covered by voluntary contributory pensions. Eight million people in rural areas receive pension that is partly contributory with the balance subsidized by the state. Gaps in the contributory pensions have resulted in the setting up of tax-financed pensions as part of a multi-tiered system, though these are found to be not sufficient. Ironically, in South Africa and Australia, people withdrew pension savings as lump sums prior to retirement so that they could qualify for government-sponsored pension schemes (Sass, 2004).

In April 2017, Japan reduced the qualifying period for national pension from a minimum of 25 to 10 years of paying contributions. This was intended to help those workers who had short careers. Republic of Korea doubled the minimum pension amount in 2014. Surplus wealth produced by Norwegian petroleum is used by that nation to fund future pension liabilities. The US and China have special state pension funds.

The Malaysian economic model has identified inclusiveness as a major component of a developed society and that country is looking into the prospect of equalizing opportunities for all. But the key question is: Are social security nets in Malaysia enough to support an ageing population so that they can have a decent standard of living? (Abd Samad & Mansor, 2017)

Pension in Netherlands

Dutch pension system has three pillars and is ranked high in terms of adequacy, sustainability and integrity. The first one is a flat-rate, universal tax-financed pension. It is based on minimum wages paid to all residents and meant to provide minimum income. The second pillar is where occupational pensions connected to a worker's employment are collectively owned by current and retired employees. The third pillar is private, individual pension is provided by an insurance company/bank. The minimum pension in Netherlands is world's second highest after that of France (Mercer, 2017).

Melbourne Mercer Global Pension Index

The Melbourne Mercer Global Pension Index (MMGPI), a comprehensive comparison of global pension systems, has covered 60 percent of the world's population. It measures the adequacy, sustainability and integrity of pension systems enabling governments to frame sustainable retirement policies.

Highlighting the need for private pension schemes to support the state's efforts, some of the recommendations of MMGPI are:

1. Raise the minimum pension levels for pensioners with low incomes
2. Make adjustments in mandatory contributions
3. Improve the vesting of benefits for all plan members
4. Raise the state pension age
5. Provide incentives to delay retirement and increase the participation of older employees in the business
6. Limit the access to funds before retirement

Table 5: Melbourne Mercer Global Pension Index: Overall Index Value Results

Grade	Index Value	Countries
A	Greater than 80	Denmark, Netherlands
B+	75-80	Australia
B	65-75	Finland, Sweden, Switzerland, Singapore, Canada, Chile
C+	60-65	Ireland, England
C	50-60	Germany, USA, France, Malaysia, Brazil, Poland, Austria
D	35-50	Italy, South Africa, Indonesia, S Korea, China, Mexico, India, Japan, Argentina

Source: https://www.mercer.com/newsroom/the-impact-of-ageing-populations-on-global-pensions.html

Pension and Health Insurance Covers

There is a positive correlation between pension and health care costs and increase in incomes, ageing, urbanization, changes in demographic patterns and a shift from communicable to lifestyle diseases. Health care and pension schemes are also related to impact on policy decisions in terms of costs incurred and exposure to risks. A coordinated effort on the part of all the stakeholders is needed to address fiscal challenges in the macroeconomic environment. Hence, The Ministries of Labour, Health, Rural Development, and Finance of the Government of India are involved in healthcare financing, retirement security, unemployment insurance, and work guarantee programs. However, the coordination is somewhat limited because coverage is not yet optimal and administrative lapses and conflicts are common. Coordination will enable effective record keeping, enhance coverage and also eliminate duplication of efforts by multiple government agencies and programs.

Healthcare expenditure increases disproportionately with the rising longevity. Proper coordination of health care and pension schemes is needed to reduce resource costs associated with managing ageing. The coordination between health care schemes and pension arrangements is somewhat fragmented in Asian economies. There is a complex relation between pensions and health care schemes (Asher & Bali, 2012).

The International Labor Organization (ILO) recommends offering social pensions and health care at low per capita costs. Social pensions (non-contributory plans) offer minimum protection to older people employed in the informal/unorganized sector. In India, lifestyle diseases are afflicting the working population even at a younger age. Healthy ageing involves better management of health care expenditure. Therefore, experts recommend the following actions:

1. Pre-fund health care expenditure in old age
2. Integrate post-retirement health insurance plans with retirement plans
3. Align public health care and pension policies

Financial sustainability of pensions and health care solutions is crucial to maximize the benefits to the ageing population (Hayashi et al., 2010). Redesigning of health care systems for pensioners through institutionalized care can help the prevention and early detection of diseases; rehabilitation and palliative care (Beard & Bloom, 2015).

Many countries face acute shortage of health care workers as they migrate to greener pastures. Medical training curriculums should include a greater emphasis on geriatrics so that clinical services for the elderly can be improved. Basic geriatric training for all health care staff is a must (Beard & Bloom, 2015).

Advances in information and communication technology and medical diagnostics can lead to managing the health and social participation of older people in an innovative manner. Remote monitoring of health, telemedicine (diagnosis and treatment of patients via advanced telecommunications media (like video conferencing) and early detection of adverse health conditions can lead to positive outcomes (Beard & Bloom, 2015).

Strategies to deal with Challenges of Ageing Population

These are classified as:

1. Health-care focused strategies
2. Retirement-focused strategies
3. Hybrid strategies

Table 6: Strategies to deal with Challenges of Ageing Population

1. Health-care Focused Strategies	
• Shift the delivery of health care to a patient-centered system with individuals assuming responsibility for their health during their life span. Holistic care for elderly patients with multiple health issues. • Early screening, diagnosis and detection increase the chance of successful treatment and minimize treatment costs. Promote wellness in the work place by making people health-literate and conscious.	• Active ageing promotes physical activity and healthy lifestyle as people age. Older people must engage socially, cognitively, emotionally and spiritually. Yoga and Meditation practice must be encouraged among the elderly. • Healthy nutrition and lifestyle community based awareness programs. Public health campaigns to lose weight and doing aerobic exercises.

• Stimulate health saving accounts in bank to encourage consumers to have a stake in managing their medical expenses and save for future exigencies. • Automatic enrolment to encourage healthcare plan membership and savings. • Encourage affordable health care (Narayana Hrudalaya) (Arvind Eye Hospital). • Maintain personalized electronic health care record systems. • Government must encourage manufacture of affordable drugs and provide incentives and subsidies to manufacturers. • Make provision for receiving higher pension with advancing age.	• Improve effectiveness of healthcare supply chain by eliminating disincentives. • Mini-clinics in local communities, - routine and preventive medical care. Mobile clinics/ vans arrive at regular intervals to collect blood samples and provide diagnostic services for pensioners. • Encourage entrepreneurship for providing such services. • Traditional incentives - doctors and hospitals are paid for their services regardless of the quality. Pay for performance - structure incentives in the health care system to reward doctors and hospitals for meeting agreed upon efficiency and quality targets.
2. Retirement Focused Strategies • Raising the official retirement age. • Retirement benefits must be communicated through financial education planning – use of long-term savings and investment products. • Consumers can manage their income and save and invest wisely. • Transparent retirement benefits information and financial planning tools. • Make investing in New Pension Scheme compulsory. • Develop pension plans that allow participants to draw from it for major life events (unexpected health expenditure, mortgage, education, etc.).	• Phased retirement options (work for reduced hours after certain age before full retirement) and permit flexible work arrangements. • Stimulate auto-enrolment options to pension schemes. • Rich retirees cross subsidize public pensions of less rich retirees (tax returns); have a certain threshold limit for rich retirees to address inequalities in social security schemes. • Strengthen the administrative efficiency of pension funds - Government bonds for senior citizens; longevity hedging products. Develop annuities market.

• Younger generation have an aversion to save in pension vehicles because money is locked for too long a period. As individuals grow older, the concern would be centered on protection against longevity risks. • Specific senior citizen financial plans (mutual funds investments) of moderate risk can be encouraged.	
3. Hybrid Strategies • Personalize underwriting health and life insurance based on healthy habits. This would give customers strong incentive to adopt healthy life styles and holistic health management. • Information about pension and healthcare providers need to be transparent so that customers can make an informed decision. • Special government investment funds for pension schemes.	• Promote work for older groups – Retirees find new work roles to remain active and healthy. Government needs to introduce supporting regulation by reviewing existing policies on mandatory retirement, age discrimination, and part-time employment, gradual exit from work and government subsidies for employers hiring older workers. • Integrate retirement and health care benefit schemes. Financial incentives should be in the form of higher pension benefits for individuals who have submitted low health care claims over their lifetime.

Source: Hayashi, C., Olkkonen, H., Sikken, B. J., & Yermo, J. (2010).

Retirement need not signal the end of an individual's career – it can herald a new phase in an individual's life to pursue tasks that are more fulfilling. Bridge- employment refers to paid employment after retirement. This is an effect of population ageing and the trend is expected to grow. Scope for part-time bridge employment at OCAD University was explored and the results of this study revealed that inter-generational knowledge transfer could lead to mature adults (baby boomers) informally mentoring young adults (millennials) (Syed, 2017) .

Pension Reforms

Increased life expectancy and low fertility rates resulting in population ageing can reduce supply of labor. This will engender productivity losses and shifts in demand for services. Population ageing, growing interest for privatization of social schemes, globalization of markets and growth of informal sector are the main factors why pension reforms are needed so that fiscal sustainability can be ensured (Gruat, 1998).

Pension reforms that vary from one nation to another are highly influenced by demographic factors and the existing pension schemes. But these are needed to sustain traditional pay structures as per the options exercised by individuals for pension schemes. Pay-as-you-go retirement schemes can no longer be the source of adequate retirement incomes as they are not sustainable due to the increase in inflation and fiscal crisis (Davis, 2005).

Reforms in pension management needs an understanding of the changes in behavior and attitudes of all actors involved. Since the dependence ratio of older people (those aged 65 and above, as a proportion of those aged between 20 and 64) is expected to increase from 22 to 46 per cent by 2050, it is better to have as many people working as possible – young people, women and older workers.

Pension systems have also been designed to create economic incentives for people to retire early and to dis-incentivize people working even after their retirement. Assume that an individual lives till the age of 90 years; then this would mean that s/he would be spending another 30 years in the post-retirement phase (Turner, 2009). Increasing the retirement age can slow the adverse impacts of ageing (Nerlich & Schroth, 2018).

A dynamic economic environment and recurring economic downturns necessitates framing future pension schemes radically different from the past (Holzmann, 2013). Success of pension reforms would depend on the retirement preferences of individual workers, company policies and general employment levels (Hinrichs & Aleksandrowicz, 2006). Such reforms move risks away from workers towards those who are retired (Bonenkamp *et al.*, 2017).

Japan, China, Chile and India are seriously looking at pension reforms. Japan is grappling with severe demographic ageing and fiscal challenges. Pension reforms can consider increasing the retirement age by 3 years gradually over a 30-year period. If the pension reforms are delayed, there is a greater chance of transferring costs of demographic ageing to the fresh entrees into the work force (Kitao, 2017).

In Sweden's defined-contribution scheme, the state credits the compulsory contributions of individuals to an account whose value increases at a particular rate. A fixed sum is delivered on retirement which can be converted into an annuity. The automatic balance mechanism can adjust the contribution rates so that the amount of the pension can vary depending on whether there is an economic recession or not. Sweden has thus upturned the traditional system to make it affordable and fair for all generations of workers.

Pension reforms in the Indian unorganized sector are also required because India does not have a social security system in place. Break-up of the joint family system and the migration of children away from their ageing parents have resulted in the government adopting several measures since 2001 to support the agenda for pension reforms.

Rapid urbanization has split the family structure leaving the elderly and retired individuals to fend for themselves. Unorganized sector and a gig economy leaves many people uncovered by pension schemes. Labour market policies need to be tweaked to permit (i) earlier entry of workers into the market, (ii) increase the retirement age, and thus (iii) lower the unemployment situation. Additionally, the participation of female labor force must also be encouraged. Pension reforms must reduce the financial burden on the younger generation so that productive capacity can be increased. People must be dissuaded from taking advantage of loopholes in the system (Borsch-Supan, 2013).

Employees' Pension Scheme (EPS)

The Employees' Pension Scheme (EPS) is a social security-oriented scheme that is provided by the Employees' Provident Fund Organization (EPFO) launched in 1995. If an employee has provided service for at least 10 years, he can get pension on retirement at the age of 58 years.

In 1996, employees were offered the option to contribute amounts towards Provident Fund over and above the then existing ceiling limits. The ceiling limit of Rs. 5000 was revised to Rs. 15,000 in 2014. Employees could, in consultation with their employers, exercise the option to contribute more from salaries exceeding Rs. 15,000 per month. This fresh option had a time limit ranging between 6 months to 1 year. Beyond this time limit, the extra contribution to the pension fund would be diverted to the provident fund account of the member along with interest. Due to lack of awareness, employees failed to opt for a higher pension. The SC ruled that there should not be any cut-off date. The Delhi HC ruled that all employees governed by the pension scheme have to be treated on par. Exempted organizations are those managing their own PF trusts. Unexempted organizations are those where the PF Act, 1952, is applicable. Thus, employees of exempted and unexempted organizations could receive higher monthly pension on the basis of contribution from their actual salaries.

Pensioners from private sector have opined that there has to be parity in the pension structure of the government and the private sector employees. Since the year 2000, the fund had run into deficit and there was no scope for paying additional relief. Through budgetary support, the government has enhanced the minimum pension amount to Rs 1000 per month. The government was planning to constitute a high-level panel to revamp the EPS. Employees were expecting a higher pension as the court had directed EPFO to divert money from PF of retirees to pension account retrospectively. Pension would be paid on the higher salary.

Recommendations

Since 1990, the average life expectancy of Indian population has increased by ten years. However, researchers at the Jawaharlal Nehru University, New Delhi, have reported that nearly 5 per cent of India's elderly population suffers from disabilities along with chronic ailments like cardiovascular problems lung diseases, diabetes and arthritis. Approximately 9 million elderly men and 14 million elderly women in India have at least one type of disability with the risk of disability rising if the individuals were already suffering from diabetes, high blood pressure and cardiac problems.

Nepal has a comprehensive pension system through which universal pension coverage is offered to everyone above 70 years. Implementation of comprehensive pension systems must be supported by political will (Kidd, 2015).

Society's concern and protection of older persons can lead to providing better access to health care for them. Social pension plans that benefit the elderly poor have proved to be effective in Mauritius, Nepal, Bangladesh and Thailand. Bangladesh, China, India has granted older workers better access to credit for small business development - especially in rural areas (Kidd, 2015).

A focused public health policy is therefore urgently needed. Individuals should lead an active and healthy lifestyle from the beginning of adulthood. This needs a coordinated effort and cooperation between the government, community health workers, the medical community and the civil society. In a 2019 United Nations survey, it was pointed out that 51.9 per cent of the respondents expressed dissatisfaction with the existing social security schemes for the elderly in India. Twenty-seven percent of the respondents partially depended on their relatives and children to meet their financial needs and 16 per cent of the respondents were fully dependent on others.

Pensions for the retired, family, widows, elderly, disability benefits, gratuity and health insurance are the various social security schemes for the ageing population in India. People above 80 years of age have to struggle to avail benefits due to lack of transportation facilities, care givers and awareness about the various schemes for the elderly. Proper communication of these schemes and proactively providing them to the actual beneficiaries on the part of those responsible seem to have fallen short due to indifference and callousness.

Social insurance is a complex concept. When there is an increase in life expectancy, its impact on life insurance and pensions cannot be ignored. Cost of life insurance decreases while there is a substantial increase in the cost of pensions and health care (Asher, 2008). The actuarial calculations for pensions and health insurance are different – these databases need to be updated and analyzed by experts.

The sothern Indian states experience more population ageing situation than the states in the north. Therefore, pension reforms must consider empirical data separately for each state. As predicting longevity trends and morbidity patterns is an inexact science, the actuarial assumptions should reflect this limitation. This calls for greater flexibility in designing the schemes to enhance long-term sustainability of pension products. Expenditure on health increases disproportionately with age. This necessitates considering pension and health care financing together as part of old-age security policy measures. But this is easier said than done (Asher, 2008).

David Wilkie had presented an actuarial view of the issue in 1995. He said, "If people live longer, they should retire at an age that keeps their future expectation of life at retirement constant." Thus, instead of the ratio of working population to retired population changing with a fixed retirement age, the retirement age should be altered so that the ratio can remain unchanged. Gradual retirement schemes can ensure tax revenues for government from older people who continue to work. Government can sponsor/reward volunteering and artistic efforts of the older people.

Bank fixed deposits in India account for 44 per cent of financial savings available to the business operations market, whereas provident and pension funds are only 14 per cent of the savings. Current consumption has to be reduced to increase the level of savings and investments. If people work longer, then the level of the working population can be maintained as a proportion of the total population. Contributory pensions should be made compulsory along with extension of coverage of tax-financed (social) pensions.

Intermediation of social security funding (health care and pensions) through financial and capital market can boost national savings and investments. This will stimulate economic growth. Increase in the retirement age can impact the labor market as well as consumption, savings and economic growth.

While an overhaul of NPS-95 is essential to consider demographic shifts in the population, it is also pertinent to consider other factors like inflation, fall in interest rates and rising health care costs before revamping the existing pension scheme. Pension reforms must seriously consider the constantly rising health care costs (Asher, 2007) taking into account the following factors:

1. Better design and delivery systems for old age assistance
2. Multi-tier social security system
3. Better governance and regulation
4. Need for financial and pension literacy
5. Innovative approaches to provide for old age-income security.

Dedicated health care facilities for the elderly in urban, semi-urban and rural areas are very much needed. Pension amounts must be adjustable to accommodate inflationary effects. Tax incentives to the younger generation must be provided if they take care of their elders. Community support must be encouraged to assist particularly older persons living alone. Interest income of senior citizens on bank deposits must be subject to higher tax exemption limits considering the drastic fall in the bank interest rates in India.The Indian government must encourage entrepreneurship in Fin-Tech that can provide free financial advice for the elderly so that they do not rely only on pension schemes. Specific investment vehicles need to be created (with caution) for pensioners that offer them decent returns on their investment.

Globalization of the economy and development of international business activities have resulted in the movement of individuals to different nations across the globe. But each country has its own social security scheme. This has an impact on the retirement benefits of individuals moving to another country seeking employment. Generally, Indian nationals working abroad had to contribute to the social security scheme of the host country. But if the overseas tenure was limited or if minimum domicile requirements were not fulfilled, these contributions would be forfeited.

Since October 2008, special provisions were introduced in the Provident Fund and Pension Schemes. A new category of workers called "International Worker" has been defined. Thus, cross-border social security arrangements came into force (Holzmann, R., & Wels, J, 2020). India has already signed such agreements with other nations. Employees may choose to receive benefits of social security in their home country or any other country where they are currently residing. The benefits can be ported. Thus, cross-border social security arrangements is another strategy to reduce the burden on the state.

Financial security is an integral component of retirement planning. Those who have inadequate pension have no other option but to seek alternative job opportunities post retirement. Flexible retirement options will encourage older workers to stay in employment at least until they reach the retirement age. Bridge-jobs can be provided during the period between a person's official retirement and full retirement. Hence, it is imperative that the government appoint a think-tank to review the statutory retirement-age now in vogue.

An efficient supervisory system and effective monitoring of the existing health insurance schemes by both the national and private insurers will stem the rot that has seeped into administration of health insurance covers. The IRDAI must look into this aspect and explore ways to encourage insurance companies to improve the quality of their services.

Ayushman Bharat Yojana (ABY), also called the Pradhan Mantri Jan Arogya Yojana (PMJAY), is a scheme for helping the economically vulnerable in need of healthcare facilities. This scheme was rolled out on September23, 2018, to cover 50 crore Indian citizens. The scheme provides for secondary and tertiary healthcare – completely cashless. In this scheme, 3 days of pre-hospitalization and 15 days of post-hospitalization expenses are covered. The sum assured is Rs 5 lakh per family per year.

If there is a way in which this scheme can be extended to pensioners at an additional nominal cost (paid for by the beneficiary) and if this can be integrated with other health insurance schemes (subject to certain terms and conditions). It would alleviate the financial burden of the pensioners. Modalities of such a scheme will need a detailed evaluation and due diligence.

Pension is only one of the ways to support the ageing population. The government must shift part of this responsibility to the pensioners and encourage them to create reserve funds from their savings (while in service) that can enable them to meet financial exigencies post retirement.

The state should encourage entrepreneurship to provide formal and informal support to the elderly and also take care of the nutritional needs of the elderly - in particular - those senior citizens who are diabetic and suffer from cardiac problems. It will be a good idea to build special hospitals exclusively dedicated to pensioners and also subsidize the setting up old age homes or health care homes that can take care of the needs of the elderly.

Conclusion

With the projected increase in the World population from 12 per cent in 2015 to 21 per cent by 2050, the number of the elderly across the globe is estimated to double from 2015 to 2050, reaching nearly 2.1 billion. Macroeconomic effects of ageing can cast an adverse fiscal effect which can be reduced by increasing the current statutory retirement age. Simultaneously, the impact of this change on employment opportunities for the younger generation needs attention. More research is needed to understand the complexities of population ageing.

This study has attempted to address the research Question – How can pension schemes be made more effective to deal with the challenges of ageing? The answer is anything but straightforward. It is indeed a complex issue!

Countries need to find a balance between long-term sustainability of pension systems and the adequacy of benefits accruing to pensioners. The Organization for Economic Cooperation and Development (OECD) has requested governments to make the pension schemes more flexible for individuals during their work-retirement transitions. This would enable employees to derive pension benefits even while they are employed. For example – this can apply to those employees who continue to work for reduced hours as they approach the retirement age. This may lead to additional pressure on pension regulators.

Financial security is an integral aspect of retirement planning. Greater collaboration between governments, local communities, fin-tech entrepreneurs, and financial services sectors is must to impart financial literacy to an ageing population.

The adequacy of pension can be gauged by the cost of living adjustments and earning replacement rates. Increasing the coverage, while maintaining or increasing the adequacy of benefits, is a challenge that developing nations have to grapple with. It may be necessary to revisit the contribution rates of pensions to mitigate inflationary trends. Otherwise, a deficit in pension accounts will need to be covered through additional tax revenues.

Universal tax-financed pension coverage can ensure that all older persons have at least a basic level of income security in old age. Implementation of comprehensive pension systems must be supported by political will. The National Pension Scheme launched by the Government of India is a progressive step.

Inadequate pensions may force those who are retired to scout for full-time or part-time work if the pension amount is their only source of income. Decline in inter-generational support (particularly in India) has driven the need for a self-sustaining pension system in the country. This can be achieved through intense collaboration and coordination among inter-ministerial, inter-state, inter-regional, inter-institutional and wise policy decisions.

Private pension schemes are plagued by problems like mismanagement of funds, low interest rates, volatile stock markets and corporate bankruptcies. This is an area that needs urgent legal and executive regulatory intervention. The Indian government must create greater awareness about the tier-3 voluntary pension schemes and promote other long-term savings options as sources of post-retirement income in addition to pensions for the elderly.

Advances in medical technologies have escalated health maintenance costs. Those with insufficient pension amounts will find it difficult to meet out-of-pocket expenses for purchase of daily requirement of medicines, regular preventive health check-ups and consultation. Present costs of health care keep rising by 10-15 per cent annually (in fact, every new batch of medicine produced and sold seems to be priced as much). Buying a health policy at a later age can be costly due to higher premiums and higher co-payment. Many long-term mediclaim policy holders are forced to terminate their policies as the premium rates have been hiked 40 per cent and more plus GST. Most plans do not pay for domiciliary treatment or for preventive health care, while all insurers pre-policy promise 'pink of health' but the claims are trimmed on the basis of clauses and conditions in fine print - post-treatment. *Therefore, it is an inevitable necessity that all individuals build a separate portfolio for medical expenses on their own if they can of course.*

Affordable and quality health care for the elderly is an area where social entrepreneurship can be encouraged. Incentives for those employed in nursing and health care sector will motivate others to join this profession.

Dependence only on pension is not an adequate and effective solution to the challenges of ageing. Multi-tiered pension schemes are only part of the solution. Inflation, vagaries in external and internal economic environment, fall in interest rates and spiraling costs of preventive and re-active health care dictate that there must be a combination of government financing and contribution by individuals for evolving a comprehensive effective pension system.

Limitations of this Research

Due to limitations of time and the unprecedented lockdown situation that the entire world witnessed on account of Covid-19, a wider empirical study could not be conducted. Population ageing is a fecund area of research and future studies can benefit from surveys conducted in different Indian states to gather more insights on the subject. Innovative ways of providing social security benefits can be explored to deal with the challenges precipitated by demands of a global ageing population - but an inevitable reality for every individual to bear and be provided for.

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