Chapter One

Introduction

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AGEING of population - the process by which older individuals come to form a proportionately larger share of the total population of an economy – is one of the most distinctive demographic events in the world today. Initially experienced in the more developed countries, now the ageing process is rapidly approaching the developing world. Various projections indicate that population ageing is going to be a major global issue in the near future. Virtually, all countries of the world will face population ageing, albeit with varying intensity and at different points of time.

The Ageing of population (or population ageing) is a modern and recent phenomenon, something that the human population has never experienced before. The population ageing is mainly due to decrease in mortality rate coupled with low fertility rate due to advanced medical sciences and improvement in the medical aid. In other words, population ageing can take place either because of decline in the proportion of the younger population or an accelerated growth in the proportion of the population in the older age group. The former is called ageing from the base and the latter is referred to as ageing in the apex (United Nations, 1956). Less developed countries like India are experiencing slow process of ageing from the base because of the rigidity of the social customs and traditional psychology of the people. The ageing in
the apex is rapid in these countries because of their awareness about health and advanced medical facility.

Population ageing is an obvious consequence of the process of demographic transition. When a nation enters into the third stage of the demographic transition, longevity of the population increases leading to the ageing of population. This can be seen through increase in life expectancy or median age in almost all countries of the world. As a consequence the study of population ageing becomes an important part of the study of demography. The process of ageing is first experienced by the developed world, particularly in Western Europe; recently less developed regions also come into the grip of this process. Academicians and researchers of social science as well as physical sciences are now showing much interest in the study of changes in the age structure and socio-economic as well as medical problems arising as a result of population ageing.

Historically, children, youth and women have attracted the attentions of the state in the development planning as they are the economically active agents of a nation. Older persons were paid little attention by the state as their size was small and were considered as economically inactive class. For this reason they were treated as recipients of social services and sometimes burden to the family as well as to the state. But recently, increase in their absolute and proportionate number coupled with their increased participation in economic activity, they have managed to attract greater attention of the state. Deteriorating health, poor economic condition and problems in the living
arrangement of senior citizens called for the state intervention in the sphere of socio-economic and income security. Responding to this, the first effort was made by the United Nations in 1982 through the First World Conference on Ageing in Vienna. (Bai, 1999).

1.2 Economics of Ageing: A Theoretical Background

In general, while discussing the economic problems of the aged and their income security, economists employ the Life Cycle Model (Ando and Modigliani, 1963). The model is useful in discussing the saving and consumption pattern of individuals in the economy at various ages of their life. In its simplest form the Life Cycle Model explains how an individual dis-saves in his early stage of life (i.e. 0-14 years) and in later ages of the life (i.e. at the age 60 plus), and how he saves in the prime working years (15-60 years) of his life. The model shows that in the first stage of life-cycle, that is at the prime working years, person starts earning more than his consumption. It is the time when he repays the debt that he borrowed in the first stage and saves for the future that is for the third stage, namely, old age where his earning, in general, drastically comes down and savings will be used to meet day-to-day consumption expenditure. This can also be applied to the elderly. Senior citizens who had earned money in their prime working age might have saved the money over and above their consumption requirements. In case these elderly have saved sufficient money required for the old age then there will not be any difficulty in the old age. But in case of poor elderly due to their low income could not save for the old age. Thus, in the old age they need assistance from others, it is justifiable if they expect help from the government.
1.2.1 Ageing and the aged

"The term ‘Old’ can be associated with physical incapacity, biological deterioration or even psychological factors" (Blois, 1991). “A man ages biologically as a continuing process, socially as perceived by the members of the society, economically when retired from workforce and chronologically one grows older with time” (Benyaklef, 1991).

Before going deep into the study it is essential to distinguish the identical notions ‘Old-Age’ and ‘Ageing’. ‘Old-Age’ is a static notion that gives a still picture of a person’s age. While comparing the age structure of different countries, we categorise them as young or old. ‘Ageing’ is a dynamic notion involving the process of changes in the age structure during two different points of time. While examining the population structure of a country from one point of time to other point of time, we come across with the changing age structure; the process is called ‘Ageing’. Broadly speaking, the term ‘old-age’ refers to the final quarter of the life or the stage of life preceding to the death of a person.

It is important to mention that, terms elderly, older persons, aged and senior citizens are used interchangeably in the study while referring to the aged people in different contexts to make the elaboration more effective.

1.2.2 Concepts of ageing

The process of ageing is a complicated phenomenon to understand and analyse, as it is very difficult to determine when the process starts and what are
its indicators are (Mahajan, 1988). Different concepts of ageing are discussed by different demographers. Mukherji (1972) used the following concepts of ageing and those are explained in this section-

a. Biological Ageing

b. Psychological Ageing

c. Sociological or Situational Ageing

d. Chronological Ageing

a. **Biological Ageing:** Biologists regard the normal ageing process as a complex of progressive changes in cellular composition and capacity for growth in tissue structure and function; in the speed, strength and endurance of the neuromuscular system and in the reduction of the capacity to integrate organ systems (Tibbits, 1963). Biologists are of the opinion that ageing begins when growth and development of organs stop (Harris, 1980). But, those who oppose this concept argue that ageing would be different from individual to individual based on his heredity, nature of work, income, nutrition and food habit.

b. **Psychological Ageing:** The psychological ageing may be identified by a person’s inability to collect and utilize information, decline in mental ability, tendency to reminisce and turn their thoughts to the past rather than dwell on present or future.

c. **Sociological Ageing:** Sociological ageing signifies the role of a person in the society. Important indicators of the sociological ageing are retirement, decreased economic and social status, increased health
problems, birth of a grand child, and reduction in social contact etc. It also reflects the increased religious activity and family affairs.

d. **Chronological ageing:** The definition of chronological ageing of people varies from society to society often reflecting the life expectancy. It also signifies the stages of development within the society. The specification is with the individual like 60 and 60+ age population.

### 1.2.3 Indicators of ageing

There is no single indicator that can be strictly used to describe the process of ageing. Various scholars have advised different indicators to measure the ageing (Rajan et. al. 1994). A researcher, depending on his requirement, can chose among the suggested indicators. Some of the common indicators of ageing process are discussed below.

1. **Broad Age Structure**
2. **Median Age**
3. **Index of Ageing**
4. **Dependency Ratio**

1. **The Broad Age Structure:** The broad age structure in any population reflects the changing composition of children of age between 0-14 years, adults of working age between 15-59 years and the elderly persons with the age of 60 years or more. The broad age structure reflects the proportion of different age groups to the total population of the country (Rajan et. al. 1994).

2. **Median Age:** The median is an important measure of central tendency. Median age is defined as the age, which divides the population into two
equal halves. The value of median indicates whether a population is young or old. Higher median value represents older population and the lower value represents the younger population. "When the population ages, the share of the older people in the population increases while the share of children and youth decreases resulting in a rise in the median age" (Concepcion, 1996).

3. **Index of Ageing:** Index of ageing is defined as aged-child ratio. In other words it is the ratio of population of 60 years and above to the population of 0-14 years. This indicator takes into account both end of the population. It is represented as number of persons exceeding age of 60 years per 100 children of the age group 0-14 years (Rajan et. al. 1994).

4. **Old Age Dependency Ratio:** The old age dependency ratio refers to the ratio of the population above 60 years to the working population of 15-59 years. Shryock and Siegel (1980) argue that if the aged population (i.e. age 60+) in the total population is less than 5 per cent then that population can be called as young population and if the old age population is more than 10 per cent then that is called old population. The path between these young and old populations is called transitional stage.

1.3 **Effects of Ageing on Economic System**

The economic role of elderly people is crucial for the sustained development of any country which is ageing rapidly. The income security is determined by the economic role of the aged. The economic role determines the use of time, experience and the skill of the aged. The impact if ageing can be discussed under the following heads-
1.3.1 Effects of Ageing on labour supply

When the economy moves from traditional stage of high birth and high death rate to the stage of high birth rate and low death rate, it is said to be the stage of population explosion (Chakraborti, 2004). Economists systematically call this transition as demographic transition (Notesten, 1953; Coale and Hoovers, 1958). At this stage, due to high birth rate and low death rate, the work-force will increase rapidly and widespread unemployment is commonly noticed in the economy. When the economy enters into the third stage of demographic transition, both birth and death rates slip down. This leads to the ageing of population (Chakraborti, 2004). Hence, in the third stage of demographic transition life expectancy increases and consequently number of retired people increases.

The ageing of population ultimately culminates in the shrinkage of labour supply. Older persons because of their deteriorating health withdraw themselves from labour force. The ageing of labour force may affect the employment structure of firms and wage rates. Social security also affects the labour supply of various age groups in the short-run (Burkhauser, 1978). The common perception is that aged people undertake low paying work. Usually, they accept lower wage and this widens the wage differentials between senior and junior labourers. In the same way young labourer may get quick promotions and his income increases rapidly. Moreover, a common reasoning suggests that with ageing of people, their knowledge and skill may become obsolete and they may lag behind in acquiring rapidly changing technology.
Hence, such technological changes may reduce the supply of labour. Economists agree that ageing of population has become one of the important factors determining the supply of labour (Quinn and Burkhauser, 1990; Chakraborti, 2004).

1.3.2 Effects of Ageing on Demand for Labour

Effects of ageing on demand for labour can be explained with the help of Marginal Productivity Theory of Labour (Ahuja, 2006). The theory explains that the demand for labour is for its power of productivity. As long as the productivity of the labour is more than its cost (wage) there will be a demand for labour. But here with the ageing the productivity of the labour may decline leading to the decline in the demand for labour. This is called direct demand for labour, there is another type of demand for labour that is indirect or derived demand for labour. The direct demand for elderly labour may decline with advancing age as the productivity of the elderly decreases due to the age factor. But the derived demand may increase as age related specific type of goods and services required for the aged increases with the ageing of the society. For example the demand for spectacles, hearing aids, wheel chairs, woolen apparel, fruits and life saving medicals may increase with the ageing of a society. By this these industries may flourish with the ageing of a society. Hence, the demand for labour to produce these goods and services may increase. At the same time the production and consumption pattern of the economy undergoes a considerable change as the goods and services produced for the consumption of senior citizens' increases. With the increased number of aged the demand for
services like nurses, doctors, hospitals, naturopathy clinics and old age homes also increases. Thus, with the ageing of a society the direct demand aged labour decreases but the indirect demand for the same increases gradually.

1.3.3 Ageing and Development

Ageing and economic development are inter-linked. This has made many researchers to study the effects of ageing on the development of an economy. Along with it, the process of ageing brings age related changes in production, consumption and development of an economy. For example with the ageing of a nation production of goods required for the aged like woolen clothes, geriatric medicines and other things increases. That is why Notestein (1954) rightly remarked ageing a ‘triumph of civilization’. In Western economy it is said that ageing brings a tremendous shift in the private and public expenditure. The argument is that private expenditure increases with the age as the expenditure on healthcare increases. Heavy public expenditure in the form of old age social security expenditure is also a consequence of ageing of population. In this connection, considerable number of policy makers in western countries fear that this reallocation of resources from development activity to consumption purpose may hinder the economic development of a state (Chakraborti, 2004). But the researcher does not agree with this Western view point. Elderly have dedicated their productive years for their family, society and nation at large, so now it is the time to look after them. For that reason public expenditure on elderly is not the diversion of the resources from productive activity but it has to be looked in from different angle. Goods
required to elderly must be produced in the sense that it is a merit good and
expenditure on elderly as the necessary expenditure. It is the moral
responsibility of the government to provide income security in the old age
when elderly are physically incapable of earning their livelihood.

1.4 Concept of Social security

"Social Security" has been recognised as an instrument for social
transformation and progress. The two basic elements of social security are
provision of a 'minimum living' to those who are deprived of the same and
'selective redistribution of income' to a target group to reduce inequalities. Far
from being an obstacle to economic progress as is often said, social security
organised on a firm and sound basis will promote development of a country. In
case labourers get benefit from increased social security and are free from
anxiety they may become more productive. Hence, Social Security is
increasingly seen as an integral part of the development process. It represents a
system of protection of individuals who cannot support themselves by their
own resources and are in need of such protection by the State as an agent of the
society. Such protection is relevant in contingencies such as retirement,
retnenchment, death, disablement and old-age which are beyond the control of
the individual members of the Society.

Taken in its widest sense, social security means the 'security of the
whole society'. This concept is so wide that it encompasses all activities of
mankind in all spheres of human life. However, the term as commonly used
connotes measures for economic security only under government auspices and
such economic security in underdeveloped countries like India does not extend to all members of the society, but only to some restricted classes of people like industrial labours and government employees. A coverage of the programme under social security would be clear from the following definition put forward by Lord William Beveridge, “the term social security is used to denote the security of an income to take the place of earnings when they are interrupted by unemployment, sickness or accident, to provide for retirement through age, to provide for loss suffered by the death of another person and to meet an exceptional expenditure, such as those connected with birth, death and marriage”(Mishra and Puri, 1999).

The concept of social security can be defined as protection provided by the society to its members through a series of public measures against the economic and social distress otherwise caused by sudden stoppage or substantial reduction of earnings due to sickness, maternity, injury, occupational disease, unemployment, invalidity, old age, death etc (Government of Karnataka, 2007).

The International Labour Organisation’s (ILO) concept of social security is based on the recognition of the fundamental social right guaranteed by law to all human beings who live from their own labour and who find themselves unable to work temporarily or permanently for reasons beyond their control. At the international level, the preamble of the Constitution of ILO also referred to the need and protection of workers against sickness, disease and injury arising out of their employment, pension for old age, and protection of
the interests of the workers who were employed in countries other than their
own.

1.5 Importance of ageing

"As the proportion of the world’s population in the older ages continue
to increase, the need for improved information and analysis of demographic
ageing increases. Knowledge is essential to assist policy makers, formulate and
evaluate goals and programmes, and to raise public awareness and support for
needed policy changes" (United Nations, 2002a).

The population age structure of the world has undergone tremendous
change. The world population aged 60 years and above was 628.9 million in
2001 which is estimated to increase up to 1.96 billion by 2050. By that time
population of the aged will be greater than the population aged between 0-14
years of age (United Nations, 2002b).

It is observed that the percentage of older population in the world has
increased from 8 per cent to 10 per cent in the course of 50 years from 1950 to
2000. This proportion is expected to increase to 15 per cent by 2025 and then to
21 per cent by 2050 as per the UN projections. In other words proportion of
senior citizens will double in the next 50 years. In this respect the study
regarding the needs and requirements of senior citizens attracts greater
attention.

The condition of India is not much different. There are 8 million aged
over 80, 29 million 70+ and 77 million 60+ population as per the census of
India. In Urban India 64 per cent elderly women and 46 per cent men are fully
dependent for food, clothing and health care on others. About 10 per cent do
not have anyone to take care of them. The number of elderly, ill and in need of
care, is over 27 million (Datta, 2007).

1.6 Review of literature

Numerous studies have been carried out with reference to ageing in
India in the 20th century. In spite of that the studies related to Economics of
Ageing are very few. Early studies concentrated mainly on the ageing
composition and projecting the proportion of old age population to the total
population for forthcoming years. Gradually studies were carried out about the
psychosocial problems of the aged. Changed socio-economic conditions of
India made researchers to think about the future problems arising out of the
increase in the absolute and proportionate population of the aged. Hence, the
study of income and income security of the aged become inevitable, as this is
the important factor affecting the health and living arrangement of the aged.
Thus it is evident that the living condition of the aged is determined by the
economic status of the aged which in tern determined by the work status,
pension, savings and monetary assistance available to the aged (Devi, 2002). In
this section an effort has been made to go into some important works carried
with a focus on above mentioned factors. The entire review is divided into two
parts, the first part considers works related to India and the world and the next
part considers studies related to Karnataka.
1.6.1 Studies related to India and the world

Vlassoff et al. (1980) made an attempt to bring out reliable source of the income security of the aged people in Maharashtra. The hypothesis was that increase in number of children increases the income security in the old age but this was proved wrong. The study reveals that in the old age economic resources are more reliable source of income security than children. With empirical evidence of Maharashtra the study challenges the very idea of old age social and income security though large number of children.

Bhende (1982) studied the growth rate of male and female elderly people with the age 60+ in urban and rural areas of India. The study used the census reports of 1971 and 1981 and considered various demographic aspects related to old-age population in India. The author found that the growth rate of male elderly with the age 60+ in rural area is higher than the growth rate of female 60+ in rural area, while the vice-versa is true in urban area between 1971 and 1981. The study has no reference to the old age income security.

An empirical study of 600 retired elderly by Desai and Naik (1982) in Greater Bombay found that nearly four fifth of the respondent elderly people got retirement pension. Nearly 30 per cent of them were working and it is also found that around 33 per cent of the elderly respondents have adequate income to meet their requirements. The study found that about 10 per cent of the respondents were indebted. The authors found that financial condition of the elderly people deteriorated drastically after retirement forcing these elderly to seek assistance from their children. The study accounted majority of the elderly
people healthy. Around 5 per cent of the respondents had serious health problems and two third of them were suffering from ailments like difficulties of vision and hearing, digestive complaints, high BP and joint pain. It is found that elderly spent less than 10 per cent of their total expenditure on health treatment.

Prakash (1982) attempted to assess the development implications of an ageing population. Important factors which are interdependent on welfare of the elderly and development of a nation were analysed in the study. These factors are welfare expenditure on senior citizens, skill base of the elderly people and their dissaving behavior. The conclusion of the author is that development implications on the old age people are more severe than the implications on the young age group. He feels that the welfare expenditure on aged in India will ultimately result in decreased development expenditure. The author found that skill base of most of the old persons is very weak and does not have any strong implications for the development purposes.

Evers (1985) studied the health status of elderly women. In her household survey the author explored that among the same age group greater percentage of women reported longstanding illness and they felt that this is limiting their activity. The author found that the same feeling is less among men.

Biswas (1987) in his study of 13 villages of Giridih district of Bihar compared the occupational pattern and social and income security of elderly people between 1960 and 1982. The author found that the work participation
rate of the elderly people has increased in the course of the time. He attributes this increasing rate of work participation to the increasing economic problems of the old age people. Aged people are dependent on others mainly because they are physically incapable. But it should be noted that the study compares primary data of 1982 with the secondary data of 1960. Hence the methodology used itself is questionable.

Mahajan (1988) studied 749 recipients of old age pension in Haryana State. The objective of the study was to highlight the problems of the aged in unorganised sector. In the study he found that bad health is the root cause of all other problems, including economic problems, of senior citizens. He opines that poor economic condition and inability to earn livelihood had forced the senior citizens to ask help from the state.

Gulati and Rajan (1988) studied the economic and social consequence of ageing in Kerala. Authors found that majority of the aged people do not have any economic source (source of income) for their daily consumption expenditure except the elderly people who have retirement pension. This study in Kerala reveals that main reason for elderlys’ work participation is to support them self financially.

Living arrangement and the income of the widows of a village in Satara District of Maharastra was studied by Vlassoff (1990). The objective of the study was to find out the impact of income security in the old age on the reproductive decisions. After a thorough study, she concluded that in south India sons are not a credible source of security to their parents. She argues that
reproductive decisions in this region have nothing to do with the old age security.

Strongly rejecting the views of Vlassoff, Cain (1991) questioned the methodology used by Vlassoff. The author criticizes the attempt of generalization of results got by widows to elderly of the region. The study holds that sons are very important and credible source of security for their aged parents and old age social and income security is an important factor affecting the fertility decisions.

The study of Kottayan district of Kerala by Joseph (1991) attempted to compare the health status of older persons in old-age home and elderly staying with their children. The study reveals that institutionalised senior citizens have more physical ailments than the senior citizens living with their family. The study shows that old-old who are more than 70 years of age are emotionally better off as compared to the young-old, the group of elderly of the age 60-70 years.

The NSSO conducted the nation wide survey and published its report in 1991. This 42nd round survey of NSSO explores the fact that 34.02 per cent of the senior citizens in rural India are financially independent as compared to 28.94 per cent of their counterparts in urban India (Government of India, 1991). The survey found that 45 per cent of the senior citizens are suffering from chronic ailments. Joint pain and cough were widespread health problems reported by older persons. Prevalence of blood pressure, heart problems, urinary problems and diabetes were common among senior citizens.
Vijayakumar (1991) studied the socio economic conditions of the aged. The author found that the provision of public health facility for aged is insufficient to meet their requirements. The study observes that senior citizens are not properly cared by their family members. The study explores the dissatisfaction among the aged about the non-availability of medical aid. The author suggests for the provision of better medical facility for senior citizens.

Rani et al. (1992) studied the expectations of the age group between 15-45 years about the old age security in Chittoor district of Andhra Pradesh. The study shows that majority of the respondents expect filial support in their old age and wish to live with their sons. But they feel that children today are less willing to take care of their parents after marriage. The study finds higher correlation between higher fertility and old age security in the interior regions of South Central India. Authors suggest that in order to decrease the dependency on children all senior citizens may be brought under the social and income security net.

The work by Sharma and Xenos (1992) attempted for demographic assessment of the aged in India. Socio-economic indicators like age, sex, marital status, literacy and work status of the elderly in India were considered for investigation. Authors projected a rapid increase in elderly population in coming decades.

Arora (1993) attempted to compare the socio-economic and psychological problems of retired and destitute senior citizens. The study observes widespread difference in the problems of retired aged and destitute
aged people. It is found that the condition of destitute elderly people is worse than the retired. The author feels that old age homes run by voluntary organizations cannot provide necessary love, affection and emotional support required by the aged people. The study demands for an integrated measure which targets not only old age but also different phases of the life of common people in order to prepare them for old age.

Bose (1993) studied the need of elderly and their care givers. In his study the author categorises the needs of the aged into financial, physical, psychological, recreational and housing needs. The study found that informal caregivers and associations like family, friends, charity trusts and NGOs are main caretakers of the elderly people.

Dandekar (1993) studied the economic independence of elderly in Maharashtra state. The objective of the study was to account the rural urban disparity as well as gender disparity in the economic independence of the aged in Maharashtra. The study found that 33 per cent of the rural elderly are dependant whereas around 46 per cent of urban elderly depend on others for their day-to-day requirements. The study shows that dependency ratio is comparatively more among females.

In his study of rural elderly of Madhurai, Shah (1993) studied the health problems of the aged and health care facilities in rural areas. Author terms visual handicap, joint pain, insomnia and back ache as common illness of the rural aged. The study found many cases of mental health problems also. The author reveals that there is a huge demand for healthcare services in the rural
area and the healthcare services currently provided in rural area are ill equipped and ill trained.

Dandekar (1996) in her comparative study brings out the difference in the economic status of the aged living in urban and rural India. In terms of poverty, the states of Kerala, Tamilnadu and Maharastra had higher proportion of poor elderly as compared to the states of Assam, Bihar and Himachal Pradesh. The study states that the provision of modern medical facility is very poor both in urban and rural areas. It is found that the percentage of male elderly people living alone is more than female elderly and elderly people prefer solitary stay than joining old age homes.

Kahn (1996) studied the problems of the aged people in two contrasting areas of Delhi namely planned and unplanned colonies. Based on the survey of 933 elderly, Kahn opines that health condition of the elderly people in the planned colony is comparatively better than the health condition of elderly people living in unplanned colony.

Mukherjee (1996) studied the health status of the aged in urban ad rural areas of Madhya Pradesh. The study comprises 560 elderly people in Madhya Pradesh; it explored the fact that number of orthopedic patients is more in rural areas, while ailments like blood pressure, heart problem, diabetes and kidney problem are more in urban areas.

The study by Yadava et al. (1996) analysed the ageing and health hazards in rural North India. The authors found that illiteracy and poverty are important factors influencing health of the aged people. The study found that as
the education level increases the vulnerability to bad health in the old age decreases.

Naik (1997) has studied some concerning issues like non availability of social insurance, provident fund and other social and income security measures for majority of the elderly people in developing countries. After a detailed study the paper advocates for government provision of income security to the poor elderly people. The author observes that poor elderly are generally poor in health and need greater attention by the government as well as by the society. Author suggests for the sound financial management of the pension fund.

Based on Census data Devi (1998) studied some economic and social aspects of ageing in India. The author explored the fact that the work participation rate of older male was 60 per cent and that of older female was only 11 per cent in 1991. Further the study reveals that most of the older people are working in agriculture related works. The study found that only a few percentage of the senior citizen are literate and most of them are male.

Reddy (1997) studied health status of the elderly people in rural areas of Tirupati. The study found that due to poor economic condition the elderly people cannot give much attention about their health and that forces them to compromise with the poor health conditions. He suggests that economic condition of the elderly people need to be improved in order to improve the health status.

Eswaramoorthy and Chandha (1999) attempted to study the quality of life of elderly in Tamil Nadu. They found that poor educational background
was the major reason for poor health awareness among elderly women whereas better education and active profession were reasons for better health awareness of male elderly people. The study found that as compared to male elderly people the health condition of female elderly people were poorer.

Vermani, et al. (1999) made an attempt to trace the factor affecting health of the aged based on various earlier empirical studies conducted by different authors. The authors, after reviewing all aspects of health, came to the conclusion that type of family, educational level, marital status and general economic status are important factors affecting the health of older persons.

Jamuna (2001) studied the living arrangement of the elderly people in Andhra Pradesh. The study reveals that, provided functional capacity and economic resources, elderly people prefer to live alone rather than staying with children or in institutions. The study brought out the fact that elderly want to live independent given other factors are favorable.

Visariya (2001) studied the demography of ageing in India. The author analysed the work status and type of work of the elderly people, prevalence of chronic disease and economic dependence of the senior citizens in urban and rural india. Based on 42nd and 52nd reports of NSSO the author found that in 1993, 69.9 per cent of the male elderly people in rural area and 44.2 per cent of elderly people in urban area were serving in some gainful jobs. It is found that in1995-96 more than 50 per cent of elderly had chronic disease like joint pain, cough and blood pressure etc.
The survey by Devi et al. (2002) studied the economic and health status of the aged in Kerala. The study in two districts of Kerala comprising 1191 respondents observes that current work status, educational level, financial condition and living arrangement are important factors which affect the health of senior citizens. The study found 62 per cent of the elderly people in good health. It explored the fact that having liquid financial asset improves the status of elderly people in the family. It is observed that the household work activity of elderly with liquid assets is more as compared to those elderly with fixed or no asset.

Engelhardt et. al. (2002) in their study discuss various components of social security and elderly living arrangement. They argue that social security benefit and living arrangement save strongly interrelated. Using econometric tools they found that widows are more sensitive to any cut in social security. Assuming privacy a normal good, they explored that a 10 per cent cut in social security measure will lead six lakh independent elderly people to share their livings. They found that except currently married, all senior citizens above the age of 65 years prefer privacy if their economic condition permits them.

Ahuja (2003) studied the provision of social and economic security measures and their implementation in India. He observes that provision of pension for low income senior citizens is the better way for the income security of the elderly people. He suggests that the implementation of social as well as economic welfare programs should be given to Panchayats. Further the author says that the Government, community and Non-Government Organisations
NGOs should work in coordination to implement the welfare programme for senior citizens.

Ramamurti (2003) studied the empowerment of the elderly people in India. The study found that more than four-fifth of the elderly people are dependents and only one-tenth of the elderly people have the pension as their major source of income and the rest have other source of income like house rent and business. The author feels that there is a need to strengthen financial, health, personal and social dimensions of senior citizens. For him, empowerment refers not only to build the capacity in them but also enable them to use this capacity to negotiate and procure their needs. For the secured old age, the author suggests measures like compulsory saving across the life span and encouragement to develop certain special skills during the working period.

Venkateswarlu et al. (2003) studied the health status of rural aged in Andhra Pradesh. The study found that health problems tend to increase with the advancing of the age and health deteriorates mainly because of poor economic status and inappropriate dietary intake. The study found that more than 84 per cent of the senior citizens are suffering from illness. The study noticed that the respondents overlooked minor ailments and revealed only the major health problems. Significant interrelationship is observed among age, perceived health status and ailments.

Alam (2004b) examined the social security schemes available for destitute elderly. In his empirical study the author explores the interstate
variations in old age pension amount, he found differences even in qualifying age for this scheme. The author is of the opinion that the pension system in India is inadequate. The study observed that majority of the unorganized sector senior citizens are left out of the system of formal retirement pension in India. He explores the need for interrelating inflation and interest rate while providing the social security to the senior citizens. The study demands the scrutiny of destitute pension scheme particularly on ceiling system of the scheme. The author opines that present pension system of India is inadequate to cater needs of the senior citizens. The study suggests for a mandatory, publicly managed and tax financed social security system.

Bongaarts (2004) studied the cost of public pension in major developed countries, namely, G-7 countries. Using important indicators like public Pension Expenditure Ratio (PER), Benefit Ratio (BR), Old-age Dependency Ratio (ODR), Pension Ratio (PR), Employment Ratio (ER) and Pension per Worker Ratio (PWR), the author attempted to bring out the widespread disparities of burden in providing the public pension. Measures like high fertility, more immigration, increase in labour force participation by increasing the age of retirement and reduction in public pension benefits are suggested to counteract problems of population ageing. The study criticises these countries for over-dependence on Pay-As-You-Go (PAYG) system and lack of adequate pension planning. The study concludes that now workers are required to save more, work longer and retire later with lesser pension benefits due to erratic pension plans.
Lahiri (2005) made an attempt to examine the role of age specific growth rates on ageing in some developed and developing countries like Japan, China, South Korea and India. The change in mean age per unit of time is taken as a measure of population ageing. The study clearly shows faster rate of population ageing in South Korea as compared to Japan. China experienced very rapid change in population ageing during the period 1982-90 as compared to the period 1953-64. The study found that the situation in India in relation to its population is different from the above three countries. With the help of census analysis of 1981 and 1991 the study shows that the change in mean age of persons aged 5 and above per unit of time in India during the period 1971-81 is positive for both males and females and it maintained the ageing process in the positive direction during 1981-91, but in 1981-91 the speed of ageing of males is more than females. The study has no reference to the income security and the health problems of the aged.

Alam (2006) studied the economic problems of the elderly in nine districts of National Capital Delhi. The objective of the study was to know the financial status of the elderly, their expenditure preferences, living arrangements, functional dependencies, availability of filial support and implications of soft interest regime.

The study found that more than two-thirds of the respondents have no earned income and are dependent on their family. But results show that aged are apparently losing the interest of co-residing with children. One important finding of the study is that reliance on family for the support in the old age is
more among elderly belonging to poor or middle class family. The study found that savings are still in their infancy and largely confined to the high or middle income aged. Health problems of the elderly are also noticed by the study. The study observed that very large majority of the elderly have health problems.

1.6.2 Studies related to Karnataka

Kanabargi (1985) has made an attempt to examine the reliability of children as a major source of income security in his exclusive empirical study in a village in southern part of India (Karnataka). He ascertains that in a subsistence economy like India, there is hardly any scope to save particularly in rural area. Further he found that having sons also does not give any income security in the old age. On the basis of his observations he has suggested that government should make old age pension a universal scheme and more assistance should be given to those elderly who don’t have children or any suitable source of income. As a conclusion, author goes against the general perception that among many children, at least one may provide security in the old age.

Hussain (1997) studied the living conditions of aged in Karnataka. The study found that, in spite of decrease in employment of the aged in primary sector, large number of older persons are economically active. The study brings out the care given to the elderly people by government and individuals of the society.

Pai (2000), in her explorative study of retired female elderly in Dharwad City found that the financial problems of the aged women are more in the male dominated society. The study found that the women retirees were well secured
by the government pension scheme. The study reveals that women are satisfied with the existing scheme of pension. This study is concentrated only on working women, more specifically retired women, but the economic condition of the non-working women is more serious than the working women but these section of the women are not considered in this study.

Prakash (2003) studied the ageing and well-being of the older people in Karnataka. She noticed that the percentage of working elderly people with age 60+ in Karnataka is less than all India level. The author found that the morbidity rate in rural female is very high in Karnataka and it is less than all India level in case of urban female elderly people. The study observes that hypertension and diabetes are major ailments in urban Karnataka, while eye related problems and dental problems are important ailments among elderly in rural Karnataka. The study also found that arthritis is found among large number of female elderly people. The study only restricted itself for the health problems and there is no reference about the income security of the old age people.

The study by Sonar and Prasad (2004) discusses the intergenerational issues in old age in Gulbarga district of Karnataka state. This empirical study explored the fact that the relationship of 19 per cent senior citizens with their younger generation is not good mainly due to poor economic condition.

1.7 Major gaps in the existing study

Various researchers have carried out studies on ageing but the study related to economic status of the aged and ageing in Karnataka is peripheral in nature. Major gaps in the study are listed below-
1. There is absolutely no study either in India or in Karnataka being conducted exclusively to analyse income security of the elderly based on primary data.

2. The earlier studies have been carried out considering economic status of either the pensioners or non-pensioners but there is hardly any study which considers both of them in a comparative manner.

3. Previous studies concentrated on certain limited areas like trends of ageing in Karnataka, psychological and sociological status of the aged, health status of the aged and problems of the retired female elderly people.

4. Earlier studies have neglected economic factors like economic sources available for the elderly to fulfill their consumption requirements, work status of older persons, utilisation of life insurance policies and income security of the elderly people. In the present study these economic factors are analysed to find out the economic status and income security of the older persons.

These research gaps have paved the way to undertake the present study.

The present research was undertaken with a strong feeling that there is a need for a comprehensive study to reveal the economic status of the aged people in Karnataka, especially in a moderately developed area in the North Karnataka region.

1.8 Significance of the study

Rapid ageing in developed economy is an eye opener for the developing economies like India which are facing the problem of rapid growth in population. Experiences of developed countries show that boom in children population ultimately leads to boom in aged population. Hence, countries facing population explosion and unemployment problems will soon face the
problem of aged people and burden of social security expenditure. Alarming by these facts many studies examined the ageing trend and its problems in India, quite a few micro level studies also conducted by social scientists to know the root level problems. The present study is a pioneering one in the sense that it attempts to study the economic strength and problems of the aged in a district of North Karnataka.

1. There are few studies conducted on ageing in Karnataka but all of them have sociological approach and considers elderly belonging to either organised sector or unorganised sector. The present study is the latest and unique in the sense that it has economic approach.

2. The present study divides the sample senior citizens into pensioners and non-pensioners and addresses the financial problems of these categories in a comparative manner.

3. The study attempts to find out income security of senior citizens through 'self perception method'.

4. Earlier studies elaborated about the presence of chronic ailments and sickness of the aged. But the present study examines the cost bearing capacity of elderly people along with the assessment of the health status of the aged.

5. Ageing studies generally examine the problems of the aged of 60+ as a single group, the essence of this study is that it considers only 'young-old' i.e. the age group of 60 to 70 years and analyses the economic and health problems. The age group of 60 to 70 is considered for the study for the reason that this population, in many cases, is economically
productive and some time elderly of this age group are main bread earners of the family.

6. Finally the study suggests policy measures for improvement of the economic and health status of the elderly people.

1.9 Objectives of the study

The study was conducted with the following mentioned objectives.

1. To examine the ageing pattern of senior citizens in India in general and Karnataka in particular.
2. To find out various sources of income of senior citizens.
3. To compare the income security of senior citizens belonging to
   a. Rural and urban areas.
   b. According to the level of education.
   c. Retirement pensioners and others.
   d. Destitute pensioners and others.
4. To analyse the health status of senior citizens and their capacity to pay for healthcare expenditure.
5. If possible to recommend some policy measures for the improvement of economic status of older persons.

1.10 Hypotheses

Following are hypotheses of the study.

1. Aged people living in joint families have greater income security than those living in nuclear families.
2. Aged people in the urban area have greater economic security than those in the rural area.
3. Aged people are not in a position to afford healthcare expenditure.
1.11 Chapter scheme

The study is organised into seven chapters. The first chapter dealing with introduction provides an insight into the definition of ageing. It deals with importance of economics of ageing, concepts of ageing and its indicators, social security measures provided for the aged in India, relevance of the present study, significance of the study, objectives and hypotheses to be investigated in the present study.

The second chapter provides the data base and methodology of the study. It gives a brief note on the study area that is Belgaum district and provides the details of methodology followed in field survey to collect data on aged persons and also analysis of the secondary data.

With the help of various indicators of ageing, the third chapter analyses ageing trends in India and Karnataka. It also provides details of work status, education level and marital status of senior citizens in Karnataka.

The fourth chapter explains the income security of senior citizens with and without retirement pension in sampled villages and cities. Economic characteristics like fulfillment of money requirement for the consumption expenditure, work status of the older persons, reasons behind the working of elderly and preference for the financial instrument are discussed to test the income security of sample respondents.

The fifth chapter deals with different social security schemes or measures providing income security to senior citizens. In the beginning of this chapter, evolution of social security schemes in India is discussed and the
subsequent sections deal with the purchase of life insurance, beneficiaries of Old Age Pension Scheme, retirement pension and utilisation of commutation. Finally the self perception of income security of respondent elderly is discussed and two hypotheses, elderly in the joint family are better secured than the elderly in the nuclear family and urban aged have better economic security as compared to the rural aged are tested with the help of statistical technique.

Chapter sixth looks into the health problems and corresponding economic problems of the sample respondent senior citizens. In this section the self perceived health status of the aged is analysed. With the help of data related to sickness in the reference period of one month, major chronic ailments health status of the aged is systematically calculated. In this chapter attempt is made to identify various sources of money for the health treatment of the aged. The hypotheses of senior citizens are not in a position to afford healthcare expenditure is tested in this chapter.

The seventh and last chapter discusses the summary, findings, conclusion and policy implications of the present study.

1.12 Limitations of the study

Important limitations of the study are-

1. The first limitation is that, present study analyses the income security and health problems of the male elderly only. The reasoning behind this is that the economic and health status of the male elderly and female elderly are completely different and cannot be clubbed. Male elderly are main bread earners of the family in their prime working age, a drastic
decline or sudden stoppage in the income of the male elderly and consequent economic dependency creates more problems for males than female elderly who are (in many cases) not bread earners and dependents throughout.

2. Another limitation of the study is that this study has not considered the old-old segment of the male elderly which comprises elderly above the age of 70 years. This is due to the fact that the health problems of the old-old are more as compared to the young-old, moreover male elderly after the age of 70 years are more accustomed to the economic dependency.

3. The elderly staying in ‘old age home’ are not considered for the reason that their economic problems are entirely different and requires a separate study. Hence this study comprises male elderly of the age group from 60 to 70 years not living in old age home.

1.13 Frontiers for further research

Based on limitations of the present study following areas of research is identified for further investigation.

1. Gender dimension of the ageing and old age income security can be investigated.

2. Researchers may undertake comparative study of income security of the ‘young-old’ and ‘old-old’.

3. One more area of research will be a comparative study of economic conditions of the elderly living with children and in old age home.