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Retirement Age for Government Employees in Kerala: Time for Reconsideration?

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Abstract: Kerala has the highest life expectancy and the lowest retirement age among all the states in India. Despite the considerable increase in life expectancy, the retirement age in Kerala remained at 55 years for many decades until the state government increased it to 56 years in 2013. Using the data from the Census of India (1971-2011) and the Sample Registration System (1974-2018), this paper examines the prescription of mandatory retirement age in the light of increasing burden of pension on the state exchequer and the increasing life expectancies. To this end, we use two dynamic approaches, 'Prospective Ageing' and 'Characteristics Based Measures of Age'. Analysis shows that a 60-years-old man and a 62-years-old woman in 2016 have the same remaining life expectancies of a 55-years-old man and woman respectively in 1976. The results based on the 'Characteristics Based Measures of Age' approach further suggest that the eligibility age for pension increases for both males and females. If a pension reform were to begin in 1976, it would have brought the pensionable age to 59 for males and 60 years for females by 2016. The findings from this study advocate for a reconsideration in the mandatory retirement age in Kerala.

Keywords: Characteristics based measures of age, Older persons, Pension, Prospective ageing, Retirement age.

Introduction

The Royal Commission on Civil Establishments instituted the pension system for government employees in India in 1881. Eventually, the government in Independent India retained the pension system (Kumar, 2003). However, the pensionable age is not uniform across the states in India. The retirement age for central government employees is currently fixed at 60 years (it was increased from 58 years to 60 years in 1998) and the retirement age for state government employees in India varies from 56 years in Kerala to 60 years in most other states (Government of Kerala, 2012).

The case of Kerala is very peculiar as it has the highest life expectancy at birth (75 years) and the lowest retirement age (56 years) for its employees, among all Indian states (Government of Kerala, 2012; Registrar General of India, 2020). The life expectancy at birth in Kerala increased from 45 years in 1956 (Rajan and Mishra, 1995) to 75.3 years in 2014-18 (Registrar General of India, 2020). Despite the considerable increase in life expectancy, the retirement age in Kerala remained at 55 years for many decades until the state government increased it by just one year to 56 years in 2013 (Government of Kerala, 2012). The experience of western countries shows that the statutory retirement ages are commonly raised to account for continuous increases in life expectancy (Weber and Loichinger, 2020). However, despite the increase in life expectancy by

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more than 30 years, over the last six decades, the statutory retirement age increased merely by one year in Kerala. At the same time, many states in India with much less improvement in life expectancy have increased the retirement age of their employees to 60 years.

Because of an early retirement age and higher life expectancy, a retired government employee in Kerala on an average spends more or less the same number of years in the post-retirement life as in the government service. This poses the question, whether it is prudent to ignore the potential of a fair proportion of experienced workforce who could otherwise be utilised in favour of the state by keeping them in employment. The increased number of years in retirement and the recent changes in the pension system from defined benefit system to defined contributory system in the state will exert double burden on the government. In addition to making a matching contribution to the pension account of the employees who joined on or after 1st April 2013 under the defined contributory pension system (Government of Kerala, 2013), the government has to continue paying the defined benefit pension to those who joined service before 1st April 2013 as they will not be migrated to the new contributory pension system. This will increase the burden on the government as they have to continue to pay pension to the retired and also make contribution to pension account of new employees, the share of whom is expected to increase in the coming years as the number of employees under the National Pension System (NPS) would also go up every year. Researchers across the globe have observed that the pension systems become unsustainable if the eligibility ages remain fixed while the life expectancy steadily rises (Sanderson and Scherbov, 2013). Globally, the older people of today have higher remaining life expectancies and are healthier than the earlier generations; a clear situation reflected and accepted in many countries by raising the retirement age accordingly (Christensen et al., 2009). It is in this context that this paper tries to redefine the retirement age for Kerala by examining the improvement in life expectancy and health status from 1976 to 2016. For this purpose, we employ two dynamic approaches, the 'prospective ageing' (Sanderson and Scherbov, 2007) and 'the characteristics approach' (Sanderson and Scherbov, 2013).

Data and methods

We used the data from the Census of India (1971-2011) and the Sample Registration System (1974-2018). Data for mid-years from 1971 to 2011 have been interpolated. Single year age data from the census is used to understand the proportion of persons at different ages. Five-year average Age-Specific Death Rate (ASDR) from the Sample Registration System from 1974 to 2018 is used to construct life tables that help in calculating the remaining life expectancies at each single year of age, the mortality rate at different ages and the ratio of person-years lived at age 55 and beyond to the number of person years lived from age 20.

Characteristics Approach: In characteristics approach, a characteristic relevant to the study of population ageing is taken. Let $C_t(\alpha)$ be a schedule of the characteristic, which gives the value of the characteristic at each chronological age α. The schedule is allowed to vary over time. If $C_t(\alpha)$ is continuous and monotonic in α, it can be inverted to obtain the schedule of chronological ages associated with each particular value of the characteristic at time *t*. These are called α-ages. That is, α-ages can be calculated from the inverse of the characteristics schedule. Thus, the chronological age $\alpha_{\kappa,t}$ at which the level of a specified characteristic is *k* at time *t* would be given by

$$\alpha_{\kappa,t} = C_t^{-1}(\kappa_t),$$

where C_t^{-1} is the inverse of the characteristics schedule at time *t*. In the simplest case, the level of the characteristic does not change over time, so that κ has no *t* subscript. The constant-characteristic ages, α-ages, is defined as those where the level of the characteristic is constant.

Number of Pensioners

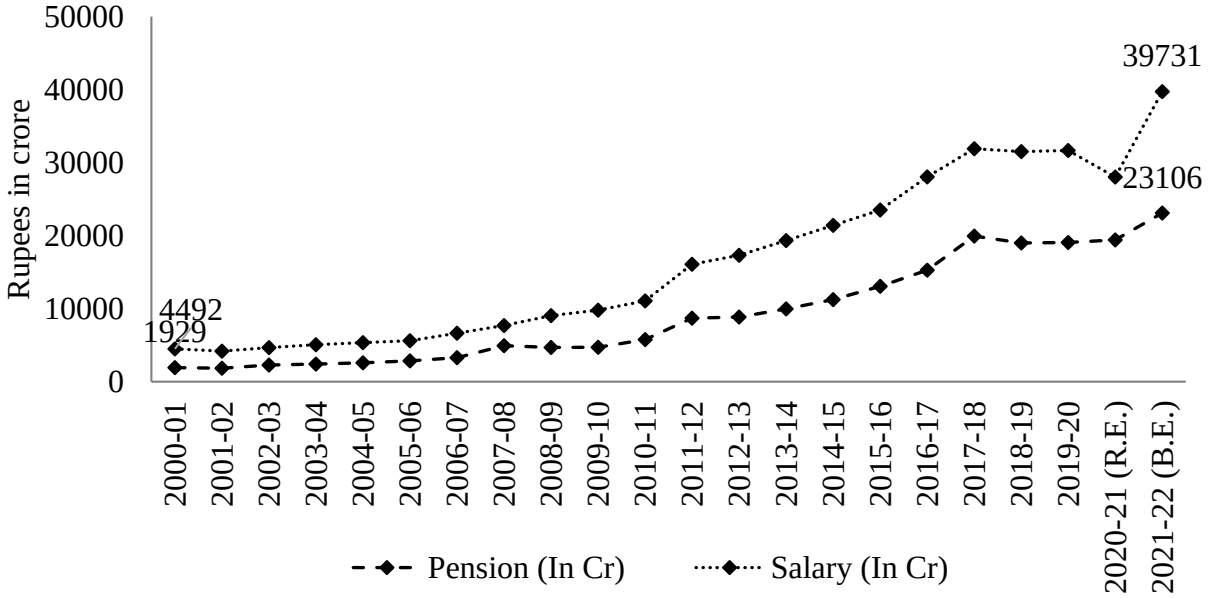
Data on the number of pensioners in Kerala is incomplete and inconsistent (Government of Kerala, 2010). The eighth pay revision commission made an observation regarding the necessity for the maintenance of a digitised data bank for pensioners. Further, the thirteenth Finance Commission recommended all the states to prepare a database of all employees and pensioners (Government of India, 2009b). The task was entrusted to the Finance Department in 2010. However, due to the complexities involved and the unorganised nature of the present system, this work was delayed (Comptroller and Auditor General of India, 2016). The available statistics indicate that the number of pensioners in Kerala is more than the number of serving employees. The number of pensioners as on October 2010 was 5.3 lakh (Government of Kerala, 2010). The number of pensioners who draws pension from treasuries as on 1st August 2016 was 5,37,583 as communicated through email by the treasury office in Kerala. Average increase in the number of pensioners is more than 17,000 per year (Government of Kerala, 2010). While the number of government staff in Kerala is only 5.1 lakh in 2021 (Government of Kerala, 2021).

Pension Expenditure

The state expenditure on pension and other retirement benefits have been rising considerably for the last few years. It is mainly due to two reasons. Firstly, people live longer than in earlier decades. Secondly, every year more and more employees retire, while those who leave the pension system by way of death is far less. In the event of the death of a pensioner, the spouse is eligible for a family pension.

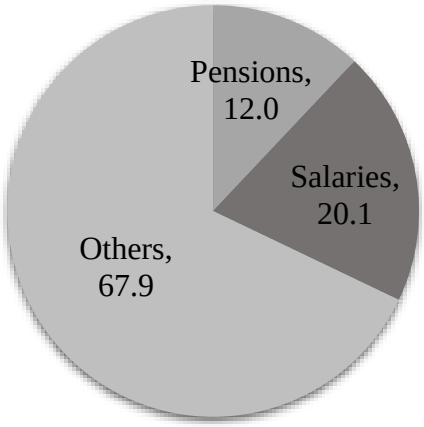
In 2000-01, the state expenditure on pension was only Rs. 1929 crores, but in 2019-20 it rose to Rs. 19064 crores. The budget estimates for pension in 2021-22 is 23106 crores. The expenses on salary have also risen considerably from Rs. 4492 crores in 2000-01 to Rs. 33676 crores in 2019-20. One of the major reasons for this absolute increase is that salary and pension are inflation indexed. How**e**ver, a major chunk of state's own revenue is spent on salaries and pensions. The state spent as high as 80 percent of state's own revenue on pensions and salaries alone (Government of Kerala, 2021). Data shows that around half of the revenue expenditure is on pensions and salaries during 2000-01 to 2019-20. In 2019-20, expenses on pensions and salaries alone constituted 48.5 percent of the total revenue expenses and 32.1 percent of the total expenditure of the state. Expenditure incurred towards pension as a percentage of the state's revenue expenditure was 30.5% during 2019-20. The tenth pay revision commission was pragmatic in making the statement that the resources of the state belong to nearly 3.5 crores of people of the state and a rising share of it should not be allotted in favour of government employees and pensioners who are only ten lakhs in number (Government of Kerala, 2015).

Figure 1: Pension and Salary Expenditure during 2000-01 to 2021-22 (In crores)



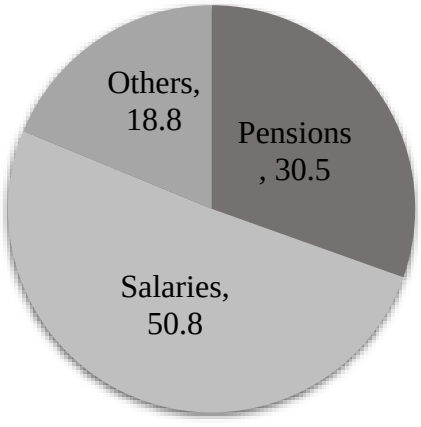
Source: Kerala Budget Reports Various Years
Note: R.E.- Revised Estimates, B.E.- Budget Estimates

Figure 2: Pensions and Salaries as Percentage of Total Expenses during 2021-22, Kerala



Source: Kerala Budget Report 2021-22

Figure 3: Distribution of States' Own Revenue during 2021-22, Kerala



Source: Kerala Budget Report 2021-22

The Double Burden of Pension

Since the inception of pension, Kerala has followed the defined benefit pension system (statutory pension) for its civil servants. The defined benefit pension system was changed to defined contributory pension system (contributory pension) for those who joined the government service from 1st April 2013 onwards (Government of Kerala, 2012). Though the contributory

pension system was introduced in 2013, the state envisaged the implementation of it since 2002, even before the National Pension Scheme (NPS) was introduced. The government had decided in principle to introduce contributory pension system for all fresh recruits first in 2002 and later in 2005. However, this was not implemented (Government of India, 2009a). The change from statutory pension to contributory pension and the increased number of years in retirement will put a double burden of providing pension on the government. The government has to continue paying pension for those who joined service till 31st March 2013 as well as pay contribution towards the pension of the newly joined civil servants. Though the contributory pension system was introduced with an intention of reducing the burden of the state on pension expenditure, this dual payment on pension substantially increases the burden on Kerala for the many decades to come. Because the number of new entrants to government service (those who are under contributory pension system) will increase every year for at least the next two decades. Similarly, a person of age 33 (presently the average age at joining the government service) who joined the government service in 2016 will retire in 2039. The government has to pay pension to the person under the defined benefit pension system for an average of 24 years, *i.e*., till 2060. With the increased years in the later life, the pensioner needs to prepare sufficiently for the prolonged years of retirement life. In the defined benefit system, retirees are certain about the pension amount they will receive. But in the defined contribution system, the pension amount depends on the returns on the assets in which the contributions are invested. Therefore, retirees will have to save more to help finance their post-retirement life or continue to work even after retirement from government service.

Life expectancy

There is a growing debate on the statutory prescription of retirement age in the government sector in the light of increased life expectancy in Kerala. During the last 40 years, life expectancy at birth has improved by at least ten years. The life expectancy for females increased by eleven years while it increased by nine years for males during 1976 to 2016. Similarly, a gradual increase in life expectancy at the retirement age (age 55 is taken here as it was the retirement age during 1976-2016) was observed for both males and females. The life expectancy at age 55 was 18.3 years for males in 1976, and it increased to 21.8 years in 2016. For females, the life expectancy at age 55 increased from 20.8 years in 1976 to 26.5 years in 2016. An increase in the remaining life expectancy at retirement age will result in more years in retirement phase. The average age of recruiters joining the government service in 2014 was 33 years, leaving only 23 years of effective service before their retirement. It leads to liability for payment of pension which is longer than the actual period of service the employee has served (Government of Kerala, 2015). It is most likely that many employees will experience more years of pension than the years of service they have rendered. It is also true that the reduced number of years in service will hardly enable the new entrants under the contributory system to financially prepare for their prolonged retirement life.

Given this scenario, we address here a few crucial questions; with such a significant increase in life expectancy at birth and remaining life expectancies at later ages, is it reasonable and justifiable to continue with the same mandatory retirement age that was fixed half a century ago? Is it right to consider all the government employees at 55 or 56 years of age as not capable of productive work in government service?

Table 1: Life Expectancies at Birth and at Retirement, Kerala, 1976-2016

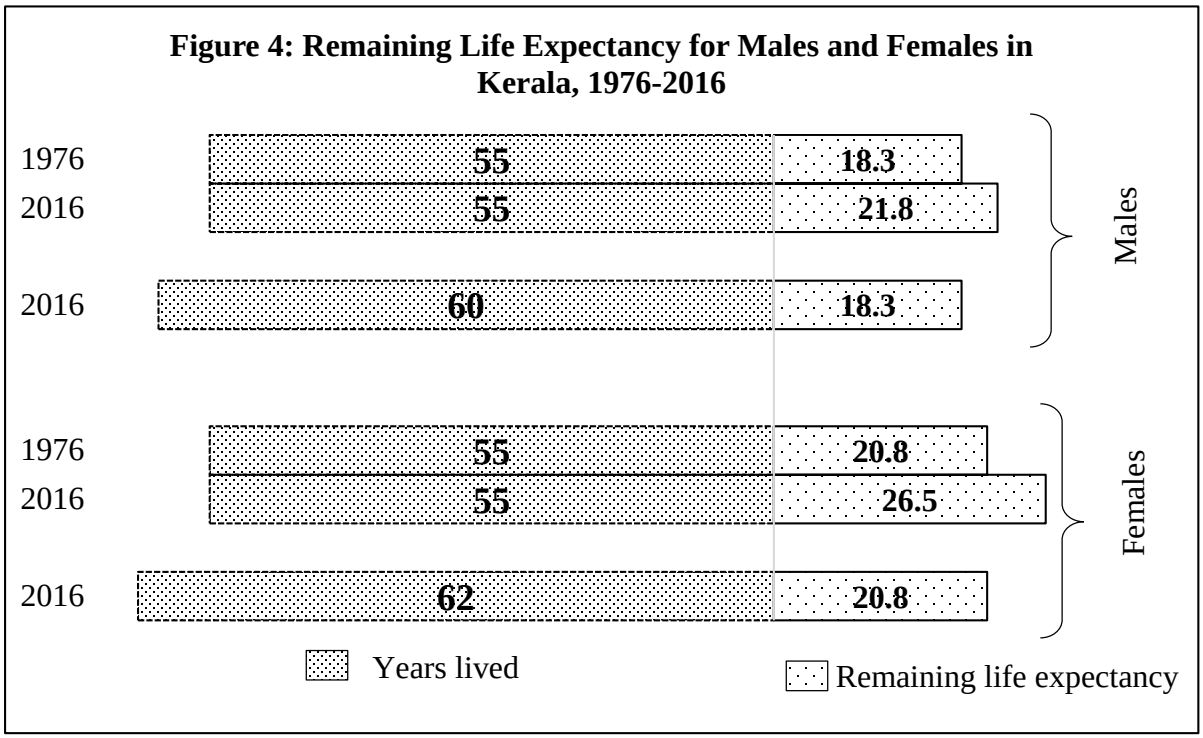
Year	Life expectancy at birth		Life expectancy at retirement (55 years)	
	Males	Females	Males	Females
1976	63.0	66.7	18.3	20.8
1981	65.2	70.9	19.4	21.5
1986	67.1	73.3	19.7	23.5
1991	68.3	75.2	19.2	24.9
1996	68.9	74.9	19.7	24.1
2001	69.7	75.5	20.3	24.1
2006	71.2	77.4	21.4	25.4
2011	71.9	77.9	21.8	26.0
2016	72.4	77.7	21.8	26.5

Source: Author's calculations

Prospective Ageing

Conventionally, old age starts at sixty years (United Nations, 2000) and in many countries, the retirement age is fixed at this age. However, people of today are ageing differently than in the past; today's ' 60 is the new 50' (Wolf, 2014). The phrase '60 is the new 50' means that a person aged 60 years today has the same health and life expectancy as a person aged 50 years a few decades ago. Studies on population ageing indicate that the idea of fixing a static age to measure ageing is changing (Rajan and Mishra, 1995; Sanderson and Scherbov, 2005, 2007, 2008, 2013). While age is a measure of how many years a person has lived already, prospective age is concerned about remaining life expectancy and considers the improvements both in health and life expectancy. Everyone with the same prospective age has the same expected remaining years of life.

An illustration of prospective ageing is given in figure 4. The first bar in the figure illustrates the life course of men born in 1921 and who survived to age 55 in 1976. In 1976, they had a remaining life expectancy of 18.3 years. The second bar illustrates the life course of men born in 1961 and who survived to age 55 in 2016, and they had a remaining life expectancy of 21.8 years in 2016. If the remaining life expectancies are kept constant from 1976, 55-years-old men in 1976 will be as old as 60 years in 2016. In that sense, we can say that for men in Kerala "60 is the new 55". A person retiring at age 55 in 1976 and a person retiring at age 60 in 2016 will have the same remaining life expectancy of 18.3 years. This indicates that even if the retirement age was increased to 60 years in 2016, retired men will have the same remaining life expectancy as the men who retired in 1976. Similarly, women of age 55 in 1976 will be as old as women of 62 years in 2016. In other words, 62-years-old woman in 2016 has the same remaining life expectancy of a 55-years-old woman in 1976. In the case of women, even if the retirement age was increased by 7 years to 62 years by 2016, the retired women in 2016 would have the same remaining life expectancy of 20.8 years as of those who retired way back in 1976.

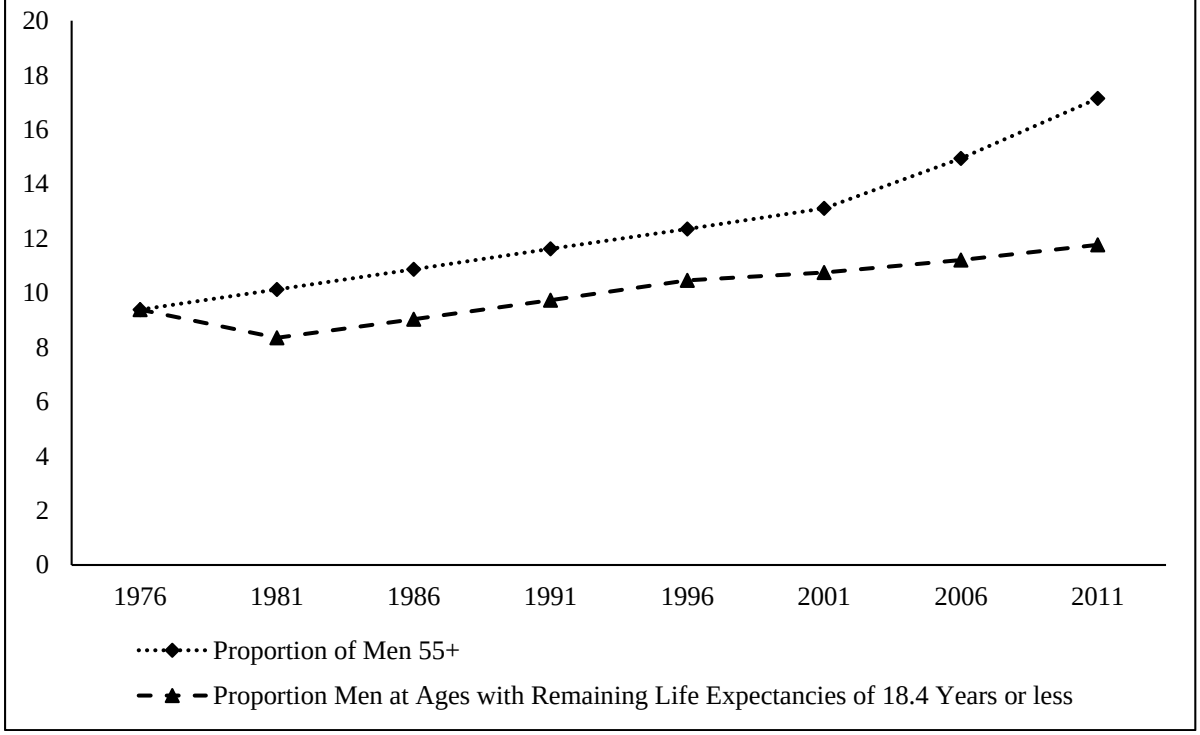


Source: Author's calculations

Proportion of Older Persons

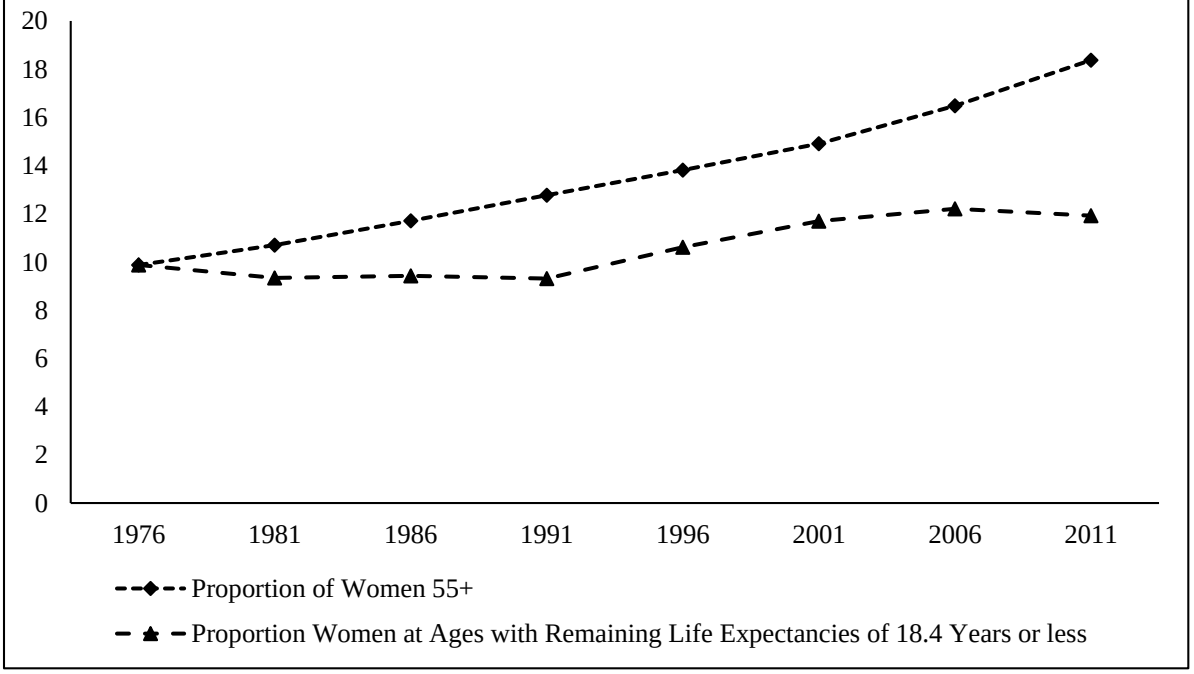
Figure 5 and figure 6 shows two ways of computing the proportion of older persons. The first method uses the conventional approach based on age, *i.e.*, the proportion of older persons above the retirement age (55 years). In the second method, prospective ageing measures are used. Prospective ageing not only measures how old people are from their date of birth but also in relation to their lengthening life expectancies. Under the prospective ageing measure, the proportion of older persons with a remaining life expectancy (RLE) at age 55 of the base year (1976) are considered. The share of older persons with an RLE at 55 years shows it has not increased to alarming proportions, as shown by the conventional measure. The proportion of older males with a remaining life expectancy of 18.3 years or less (RLE for men at age 55 in 1976) was 9.4% and gradually increased to only 11.8% in 2011 as against 17.1% of older men aged above 55 years. Similarly, the proportion of older females with a remaining life expectancy of 20.8 years or less (RLE for women at age 55 in 1976) was 9.9% and it increased to 11.9% as against 18.3% by conventional measure. It shows that depending upon the method chosen to define the older population, the proportion of the older population can vary. While the conventional measure shows that the proportion of older persons has risen alarmingly, the prospective ageing measure shows a different picture.

Figure 5: Proportion of Men 55+ and the Proportion of Men at Ages with Remaining Life Expectancy of 18.4 Years or less, Kerala, 1976 - 2011



Source: Author's calculations

Figure 6: Proportion of Women 55+ and the Proportion of Women at Ages with Remaining Life Expectancy of 20.2 Years or less, Kerala, 1976 - 2011



Source: Author's calculations

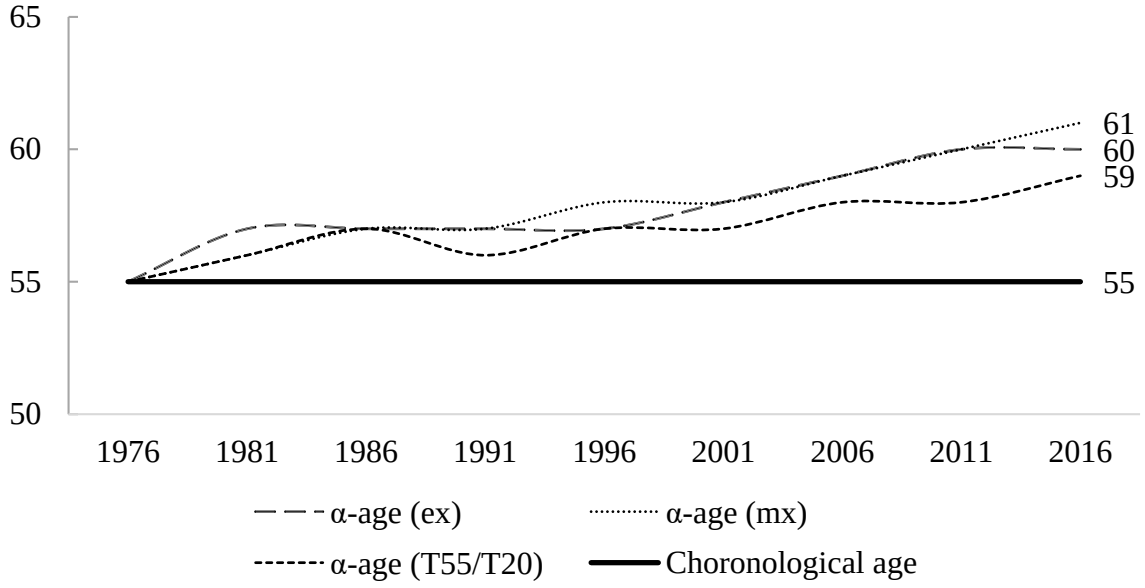
Characteristics Based Measures of Age

Characteristics based measures of age help to understand the age at which a person experiences the same characteristics experienced at the pension age (*i.e*., we keep the selected characteristics constant over the years). To understand this, we take four characteristics into consideration; chronological age, the remaining life expectancy at age 55, the mortality rate at age 55 and the ratio of person-years lived at age 55 and beyond to the number of person years lived from age 20 (life course ratio). Figures 7 and 8 show the α-age transition trajectories for males and females. The values of four characteristics are set at levels observed for a 55-years-old man and 55-years-old woman separately in 1976. By construction, all four lines coincide at age 55 in the base year (1976). The α-age e_x (remaining life expectancies) transition trajectory shows the chronological ages that had the same remaining life expectancies as observed at age 55 in 1976. The α-age m_x (mortality rate) transition trajectory shows the chronological ages at which people had the same single year mortality rate as was observed at age 55 in 1976. The α-age T_{55}/T_{20} transition trajectory does the same thing for the life-course ratio.

The figures below show that the age at which these characteristics are observed is rising with time for both men and women. The pattern is distinctly different for females compared to their male counterparts. For females, all the α-ages rise faster than the α-ages recorded for males. The e_x based α-age reached 60 years and m_x based α-age reached 61 years for males in 2016 while the α-age based on the life course ratio rose slowly and reached 59 years in 2016. This demonstrates that a man aged 61 years in 2016 has the same remaining life expectancy and mortality rate as of a man aged 55 years in 1976. The ratio of number of person years lived at age 55 and beyond to the number of person years lived from age 20 also shows that this life course ratio is the same for a man aged 59 years in 2016 and a man aged 55 years in 1976. This further indicates that if a constant α-age pension reform were to begin in 1976, it would have brought the pensionable age for men to 59 years in 2016. It also shows that a man was to retire at 59 years in 2016, he would have a better remaining life expectancy, reduced mortality rates and same life course ratio as of a man who retired in 1976. The increase in α-ages for all the measures was much faster for females than males. The m_x based α-age rises faster than the α-ages for the other two characteristics, and the α-age based on the life-course ratio rises the most slowly for females. Keeping the α-age with regard to life course ratio constant would have meant that the age of eligibility for pension would have risen at a rate of about one month per year for males and 1.3 months per year for females over the period 1976–2016. If a constant α-age pension reform were to begin in 1976, it would have brought the pensionable age to 59 for males and 60 years for females by 2016. In comparison, using the m_x based α-age, it can be seen from the figures that men aged 61 years in 2016 would be as healthy as a 55 years old men in 1976. Similarly, a female aged 61 years in 2016 would be as healthy as a female aged 55 years in 1976. Measure based on remaining life expectancy shows that a male aged 60 in 2016 will have the same life expectancy as a male aged 55 years in 1976. Similarly, a female aged 62 years in 2016 will have the same life expectancy as females aged 55 years in 1976. It illustrates that a woman who retired at 60 in 2016 would have a better life expectancy, reduced mortality rates and better life course ratio than a woman who retired at 55 in 1976. Both the figures show that even if the pensionable age was raised to 59 years for males and 60 years for females in 2016, the retirees still would have enjoyed better remaining life expectancy, reduced mortality rate and better life course ratio than what a retiree in 1976 would have enjoyed. Keeping the α-age with regard to any of the three characteristics

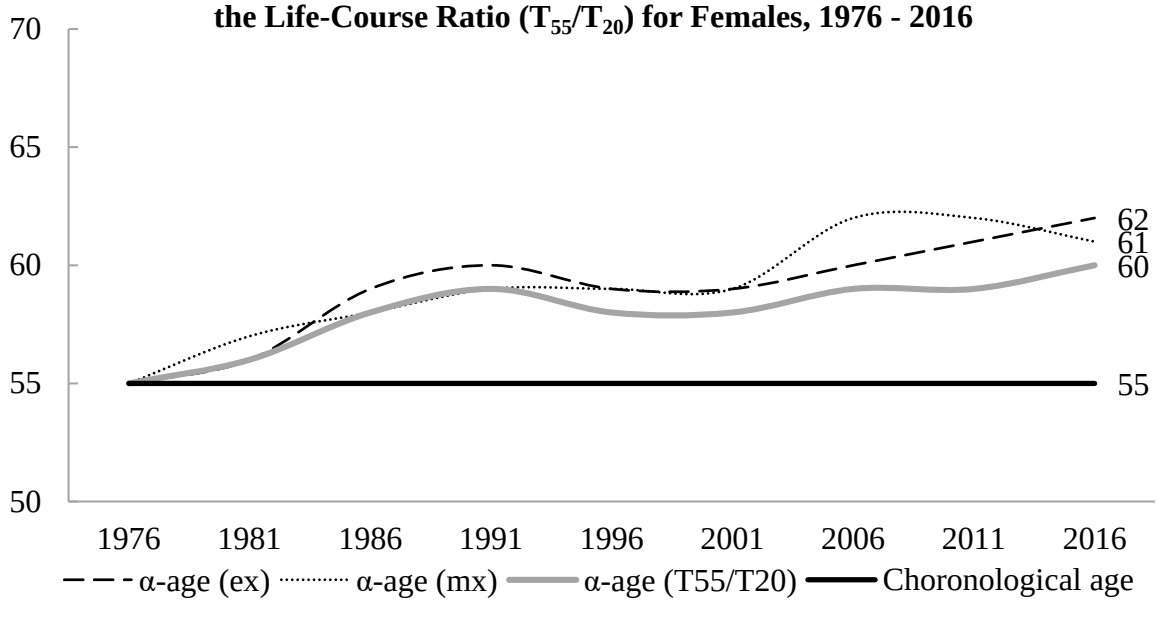
constant would have meant that the age of eligibility for pension would have risen at a rate of about one month per year on an average over the period 1976–2016.

Figure 7: Characteristics Based Measures Showing α-ages Associated with Remaining Life Expectancy (e_x), the Mortality Rate (m_x), and the Life-Course Ratio (T_{55}/T_{20}) for Males, 1976 - 2016



Source: Author's calculations

Figure 8: Characteristics Based Measures Showing α-ages Associated with Remaining Life Expectancy (e_x), the Mortality Rate (m_x), and the Life-Course Ratio (T_{55}/T_{20}) for Females, 1976 - 2016



Source: Author's calculations

Conclusions

We found that the life expectancy at birth for males has increased by nine years from 1976 to 2016, and for females, it has increased by 11 years during the same time period. On an average, a person in Kerala is expected to live an additional 10 years by the year 2016 as compared to 1976. There is no doubt that the life expectancy and health status of the older population have improved considerably and at age 55, they are capable of working productively for many more years. The prospective ageing measure and characteristic based ageing measures show that the onset on 'old age' has been postponed by at least 3 to 4 years by 2016 as compared to the situation in 1976. Men aged 59 years and women aged 60 years in 2016 enjoy the same or better remaining life expectancy, better life course ratio and reduced mortality rate than those men and women of age 55 in 1976.

The results of our analysis show that the demand for a rise in the mandatory retirement age in Kerala should not be overruled in the context of increasing remaining life expectancies, reducing mortality rates, the shift from the defined benefit pension system to the contributory pension system and the ever-increasing financial liability on the state exchequer. It is also an opportunity to make use of the experience and talent of existing workforce for some more years, if we consider 56 years is too early for retirement. Many governments in the western countries have increased the retirement age to sustain a viable pension system (Pilipiec et al., 2020). The analysis also shows that it is justifiable to argue for a differential retirement age for males and females, considering that women have better remaining life expectancy, reduced mortality rates than their male counterparts and also considering the fact that women in Kerala have long remaining years in retirement and the high widowhood status.

In general, arguing in favour of an increase in the retirement age would seem unacceptable for many and may even attract opposition from youth considering the high levels of unemployment prevailing in the state now. But alternatively, a policy can also be suggested to ensure a minimum number of working years for all. An upward revision in the compulsory retirement age could help the government in utilising the capacity and potential of a fair proportion of experienced employees who otherwise would be considered as 'aged' and 'economically unproductive'. This will also help in reducing the burden on the government for providing pensions and other retirement benefits. Revising the retirement age in Kerala can be beneficial for both the government as well as for the employees. It can help the government in a more realistic way of dealing with the ever-increasing financial burden on pensioners and the employees can effectively work some more years and save for their prolonged years of life after retirement.

Acknowledgements

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