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Demographic Transition in Andhra Pradesh : Dividend or Burden?

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Introduction

Andhra Pradesh is one of those Indian states which have shown a remarkable performance with respect to demographic transition during the last two decades. The impact of the transition can be seen in terms of growth of population and the change in the age structure of population. The state has witnessed its lowest ever growth of population in the recent past. Also observed is that change in age structure wherein the share of child population (0-15 years age) has drastically declined during the last two decades and there is a corresponding increase in the share of adult and old age population. The demographic profile of the population in terms of its size and composition is important in determining the level of development. In the development perspective age structure and distribution of population is a crucial demographic factor more than the size of the population.

The particular phase of demographic transition, i.e. early commencement of decline of death rate to that of birth rate, widens gap between birth and death rate for a certain period of time and results in change in the age-distribution of population. The faster decline in mortality especially the infant mortality rate owing to developments in health care, increases the chances of survival particularly that of children born in that phase and hence results in more number of children in the absence of corresponding rate of decline in the birth rate. The age cohort that born in this phase of transition, when it transits/moves through different age structures in its life time the corresponding age structure indicates a bulge in age group distribution - it would be having relatively higher proportion of population in the distribution.

The economic importance of the transition is the transit age group/structure of the transition phase cohorts, wherein when they are through below 15 years age group, relatively higher proportion of population in the age group indicates the higher dependency ratio and when the

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age cohort transit/move through working age group (15-59) it is considered as an economic advantage as the relatively higher proportions of population lies in working age group and results in more number of persons available for work and lesser dependency ratio – referred as demographic dividend. When the age cohort crosses 60 years and transits in old age group it will become burden again, old age burden. Moreover, the economic advantage of the demographic dividend depends on the employment and unemployment of the working age population and employment opportunities available and human capital including education and skills of the people. Unless the demographic dividend properly harness the dividend may become burden.

While most of the developed countries moved out of dividend phase and entered into aging burden phase, the developing countries are now witnessing demographic dividend phase. India is one of the countries that are experiencing bulging youth (15-34) and thereby working age (15-59) population termed as demographic dividend given its economic advantages. Within the country, Andhra Pradesh is one of those states that are having the similar experience of bulging working age population. In this context present paper aims to examine the demographic transition and its impact in terms of dividend or burden to the society and economy of Andhra Pradesh.

I Demographic Transition

Andhra Pradesh, in terms of population, is the fifth largest state in India. However, the share of the state in the country's total population had declined from 8.3 per cent in 1961 to 7.2 percent 2001. The population of Andhra Pradesh almost quadrupled in the last century from 19.1 million in 1901 to 76.2 million in 2001. But the three-fourths of this increase took place in the latter half of the 20th century. The decadal growth of population was below 15 per cent until 1961; thereafter it rose till 1991 and the decadal growth (24.2%) during 1981-91 was the highest ever recorded during the 20th century. A dramatic (sharp) decline, however, has been observed during 1991-2001 where the rate of growth of population was only about 14 percent. The annual compound growth rate for Andhra Pradesh was 1.37 per cent, which was much lower rate than the all-India average of 1.93 per cent. The RGI projections indicate that although the size of the population would increase further over the period 2026, the rate of growth in population would be very low and it would be declining further.

Table 1.1: Size, Growth and Composition of Population

Year	All-India			Andhra Pradesh			
	Population	Growth	Density	Population	% in India	Growth	Density
1	2	3	4	5	6	7	8
1951	361.1 M	1.25	117	-	-	-	113
1961	438.9 M	1.95	142	36.0 M	8.2	-	131
1971	548.2 M	2.20	177	44.0 M	8.0	2.03	158
1981	665.3 M	2.22	216	54.0 M	8.0	2.07	195
1991	838.6 M	2.14	267	67.0 M	7.9	2.20	242
2001	1028.6 M	1.93	325	76.2 M	7.4	1.37	277
2011	1210.5 M	1.49	363	84.6 M	7.1	1.07	308
2016*	1268.9 M	1.25	386	88.4 M	7.0	0.84	321
2021*	1339.7 M	1.09	408	91.5 M	6.8	0.71	333
2026*	1399.8 M	0.90	-	94.1 M	-	0.50	-

Note: * Projections; M - Population in millions; Growth is compound annual growth rate; **SR** – Sex Ratio; **Density** – Number of persons per square kilometres of geographical area.

Source: Census of India.

The state is undergoing a rapid demographic transition along with the other south Indian states Kerala and Tamil Nadu. The three critical factors in the process of demographic transition are fertility, mortality and migration¹. However, it is observed that the role of migration is insignificant in the overall population dynamics in Andhra Pradesh and hence, fertility and mortality are the major contributing factors for the observed demographic transition in the state.

Over the period both the birth and death rate in the state had fallen to lowest levels. The death rates began to decline steadily, much earlier than the decline of birth rate. Although both the birth and death rates began to decline in the state from the 1960s, there was a sharp decline in mortality rate (CDR) during 1960s and 1970s. Thereafter the pace of decline slowed down especially since the 1990s the trend in mortality rate has almost flattened. Whereas the rate of decline in birth rate was slow during 1960s and 1970s and it turned to be sharp during 1980s and the sharpness in the rate of decline continued thereafter till date.

The faster rate of decline in the mortality rate without a corresponding sharp decline in the birth rate during 1960s and 1970s the gap between birth and death rates (indicating the natural growth) had increased and thus resulted in the highest rate of growth ever recorded in population of the state during 1980s. Thereafter, since 1980s relatively the higher rate of decline in birth rate than that of mortality rate reduced the gap between birth and death rates (i.e. natural growth) and thus resulted in the sharp decline in rate of growth of population in the state.

Table 1.2: Crude Birth (CBR) and Death Rates (CDR), and Total Fertility Rate (TFR) in A P and India

Year	CBR		CDR		I M R		TFR	
	AP	India	AP	India	AP	India	AP	India
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>
1961	39.7	41.7	25.2	22.8	-	146	5.5	-
1971	34.8	41.2	14.6	14.9	106	129	4.8	5.4
1981	31.7	37.2	11.1	12.5	86	110	4.3	4.5
1991	26.0	32.5	9.7	9.8	73	80	3.4	3.6
2001	20.8	24.8	8.1	8.4	66	66	2.3	3.1
2008	18.4	22.8	7.5	7.4	52	53	1.8	2.6
2009	18.3	22.5	7.6	7.3	49	50	1.9	2.6
2010	17.9	22.1	7.6	7.2	46	47	1.8	2.5
2011	17.5	21.8	7.5	7.1	43	44	1.8	2.4

Note: 1. Birth and Death Rates are per 1000 Population; 2. IMR - Deaths per 1000 live Births

Source: SRS, Registrar General of India.

Infant mortality is an important contributing factor for the death rates in overall population. It (infant mortality) is the single largest contributor for the total deaths across age group in India as well as in Andhra Pradesh. Therefore the sharp decline in death rate would not have been possible without a sharp decline in the infant mortality rate.

The infant mortality rate (IMR) in Andhra Pradesh has shown a sharp decline over the period 1971-2011. In the mid 1970s there was an increase in IMR in the state but in the late 1970s there was a sharp decline. The rate of decline in IMR in 1970s was the highest ever and thereafter although the sharpness rate of decline in IMR is slowed but the IMR has been continuously declining till the end of the 20th Century. Once again the rate of decline in IMR turned out to be as sharp as that of 1970s during the last eight years.

The decline in the infant mortality indicates the better and increasing survival rate of children. This phenomenon definitely would have affected the fertility rate. The sharp decline in the infant mortality over the last four decades and thereby increasing chances of survival rate has a corresponding decline in the fertility in the state. According to SRS annual estimations, the fertility rate in the state declined to 1.8 in 2008, below replacement level (i.e. 2) from its highest at 5.5 in 1961. The fertility transition in terms of declined fertility rate below the replacement level is the main contributing factor in demographic transition in Andhra Pradesh.

Historically, the fertility level in south India has been lower than in the rest of the country. The variation in fertility in the other three southern states remained more or less the same,

and the birth rate in Andhra Pradesh remained higher than in the other states. The Sample Registration System (SRS) data indicates that the total fertility rate (TFR) in Andhra Pradesh remained more or less stable at around 5 per woman in reproductive age group from 1961 to 1971. It took almost three decades for TFR to reach three children per woman but once this threshold level was reached, the further decline to two children took only about ten years. The pace of decline in fertility was slower till the first half of the 1980s but thereafter there has been a rapid decline in fertility, faster even as compared to other southern states particularly between 1987 and 1996. According to NFHS III (2005-06), the Total Fertility Rate (TFR) for the state is below that of Kerala. The pace of fertility decline outstripped the decline in mortality rate in the second half of the 1980s and resulted in decline in the natural growth of population during 1990s.

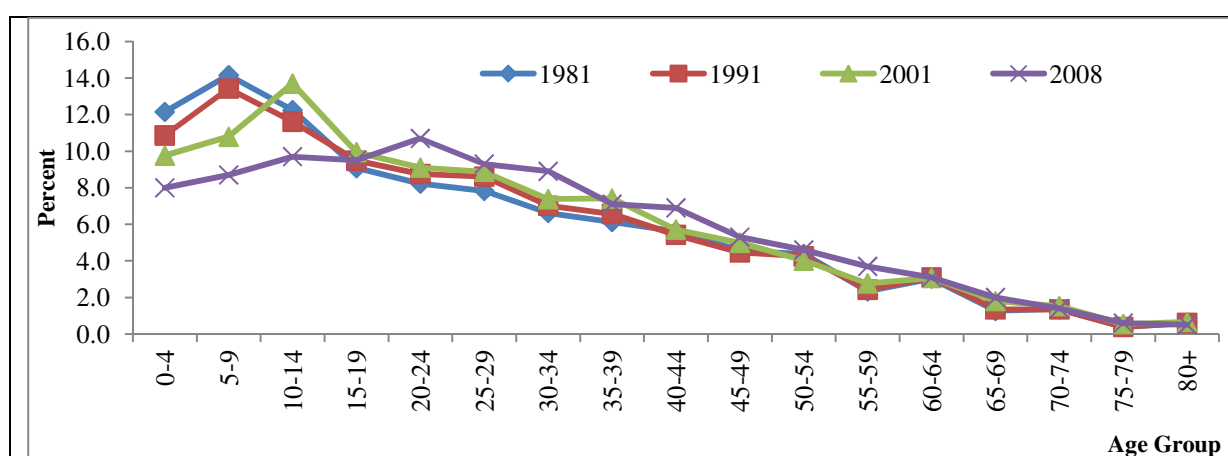
While explaining the contributing factors for the fertility transition the Classical theory says that drastic decline in fertility level would not be possible without changes in terms of improvement in material conditions and economic well-being, increase in female literacy, improvement in child survival, exposure to media and modern values and so on. However, the classical theory of fertility transition fails to explain the experience of Andhra Pradesh. It is to be noted that fertility differences have been narrowed down considerably among women with different levels of education and women across locations and social groups. The TFR fell at a faster rate in rural areas compared to urban areas so that the rural and urban difference has virtually disappeared. According to NFHS-3 data for 2005-06, TFR for urban areas was 1.7 and for the rural it was higher (1.9) by only 0.2 points in the state. Thus it is leading to homogenization across locations in terms of reproductive behavior in the state. None of the conditions that are associated with the fertility transition according to Classical theory are better than many other states in India but only the TFR. Therefore an alternative explanation is needed for the experience of Andhra Pradesh in terms of fertility transition. A few studies² based on NFHS II data show that exposure to mass media and contraceptive use, have had a relatively strong influence on fertility decline.

II Demographic Dividend

The state has experienced the two phases of transition wherein one phase is of faster decline of mortality rate than that of birth and resulted in widened gap between birth and death rates (during 1960s to mid 1980) and the second phase is not only had corresponding rate of

decline in birth rate with that of death rate and even more faster rate that has been reducing the gap between death and birth rates (Mid 1980s onwards). The first phase cohorts increased the proportion of corresponding age group in which through the cohort transits and the second phase cohorts reduced the corresponding transit age group. The increasing proportions of adult and old age when compared to previous Census is a consequence of first phase and the declining proportions of child population is a consequence of the second phase of transition.

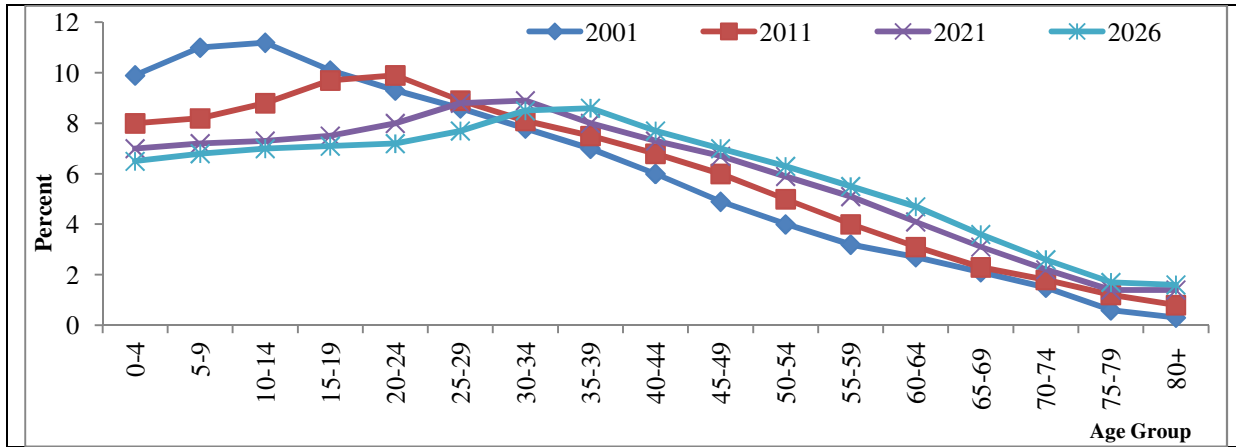
Figure 2.1: Changing Distribution (%) of Population by Age in Andhra Pradesh - Actual during the last three Decades



Source: Census of India and SRS.

The distribution of population by 5 years interval age groups in the state indicate the changing distribution of population over period of time wherein the younger age groups shares have been declining and there is a corresponding increase in the adult and old age groups' shares. The RGI projection for the state of Andhra Pradesh also indicate that the trend of declining younger age groups shares with corresponding increase in the adult and old age groups shares would continue. The beginning of second phase of transition is reducing the proportion of child population in the total.

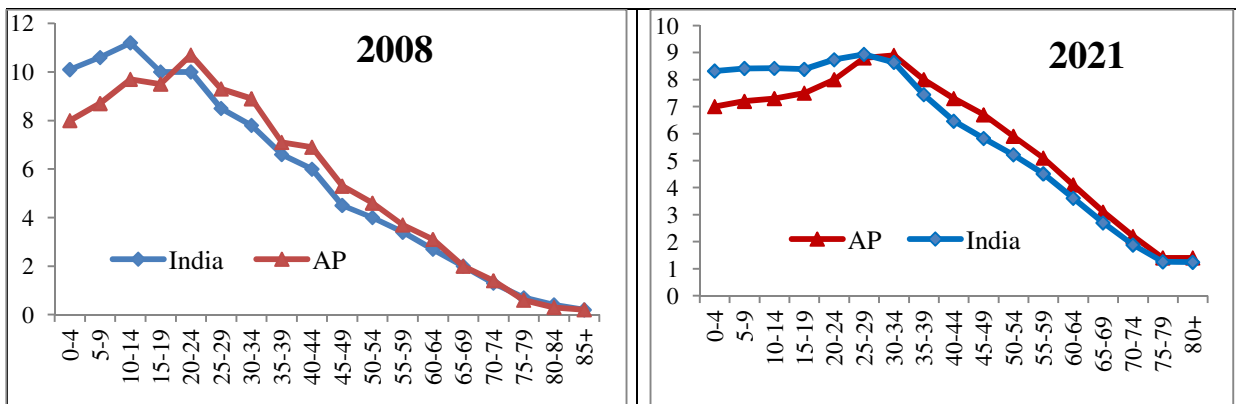
Figure 2.2: Changing Distribution (%) of Population by Age in Andhra Pradesh- Projections for the next one and half Decade



Source: Census of India, RGI, New Delhi.

The distribution of population by age groups in 2008 indicates that when compared to the situation at all-India level the situation in the state seems to be relatively advantageous (Figure 2.3). On the one hand the advantage of Andhra Pradesh over the situation at All-India level is the lesser proportions of child (5-14 age) population. On the other the proportion of population in the working age group in the state is relatively higher than that of at all-India level. The relative advantage of higher proportion of working age population in the state continues further, after a decade period in 2021 (Figure 2.3).

Figure 2.3: Distribution of Population by Age groups in India and AP

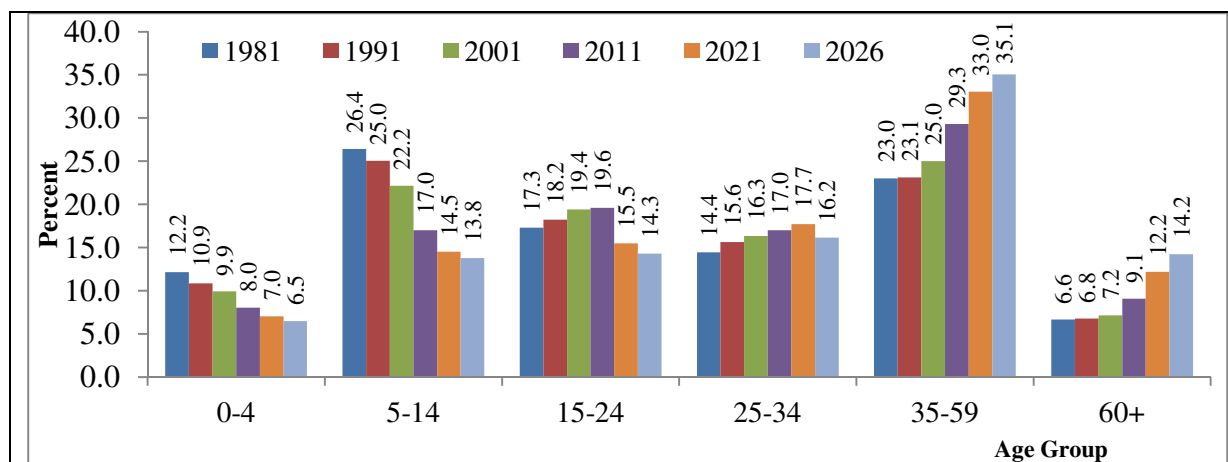


Source: SRS Estimations, 2008 and RGI Projections.

For the relevance of analysing demographic dividend of working age population in the state, the broad five year interval age groups reduced to 6 categories of age group of which three (15-24, 24-34 and 35-59) categories related to working age (15-59 age) population and the other three are related to outside/non-working age population. The distribution of population

in these 6 age group categories indicates that the share of child population (both 0-4 and 5-14 age groups) in the state had declined during 1981-2001 and it would continue to decline further upto 2026.

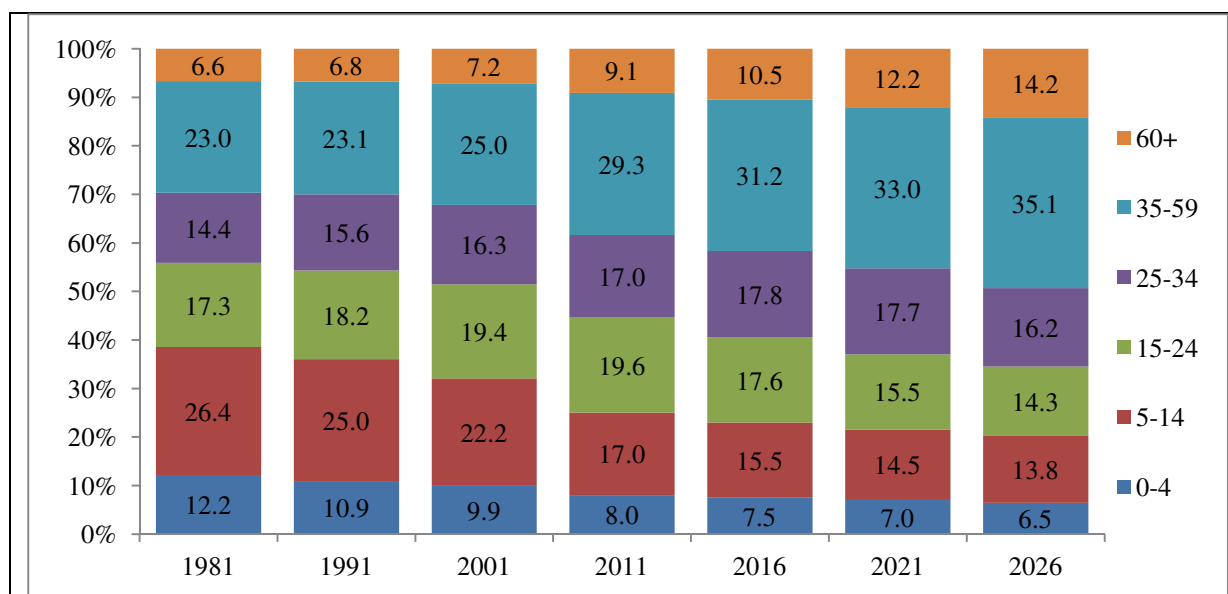
Figure 2.4: Changing Distribution of Population by Age Group in Andhra Pradesh



Source: Census of India, RGI, New Delhi.

For the youth (15-25 age group) population in the state their share is increasing and reaches its peak by 2011 and thereafter it would began to decline. Given the trend the state had lost the opportunity to take advantage of increasing share of youth in the total population. Similarly for the young adults (25-34 age), their share is increasing and reaches its peak by 2021 and it would began to decline thereafter. It is an advantage for the state to take advantage of the increasing share of young adult (25-35 age) in the total population and thereby their size in the working age group. Also for the 35-59 age group and old age (60 +) their respective shares in the total population have been increasing continuously. The increasing share of 35-59 age group also indicates the economic advantage for the state. However, one must be aware of and be cautious about the increasing share of old-age (60+ age) population and there their size. The state must have to design a policy to address the issues related to old age problems.

Figure 2.5: Changing Distribution of Population by Age group Categories, Andhra Pradesh



Source: Census of India, RGI, New Delhi.

Herein, on the whole, one can say that the share of child population is declining over a period and the share of working age (15-59 age) population is increasing continuously (Table 2.1). It indicates the availability of more number of labour force. Given the change in distribution of population the actual number of population in the working age had increased from 29.3 million in 1981 to 46.3 million in 2001 and the projections indicate that it would have further increased to 55.8 million by 2011. Again it would be increased to 60.7 million within decade ahead by 2021.

The rate of growth in population across age groups indicates that it has been declining since 1981 in the total population and it would continue to decline further (Table 2.1). The trend of positive but declining rate of growth is observed across all age groups during 1981-2001. However the projection indicates that rate of growth of child population turned to be negative during 2001-2011 and the negative rate of growth extends to 15-24 age group during 2011-21 and 25-34 age group during 2021-26. For the 35-59 age group, its rate of growth has increased to its peak during 2001-11 and begins to decline thereafter but remains positive till 2026. For the overall working age population (15-59 age) the rate of growth shows a declining trend from its peak in 1981. The cause of concern must be regarding high and increasing rate of growth in old age population of the state.

Table 2.1: The Size and Growth of Working-Age Population in A P

Year	Child Pop (0-14)	Working Age				Old age (60+)	All
		15-24	25-35	35-59	15-59		
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
Population (in Mil)							
1981	20.6	9.3	7.7	12.3	29.3	3.6	53.5
1991	23.9	12.1	10.4	15.4	37.9	4.5	66.5
2001	24.4	14.8	12.5	19.1	46.3	5.5	76.2
2011	21.2	16.6	14.4	24.8	55.8	7.7	84.7
2021	19.7	14.2	16.2	30.2	60.7	11.2	91.5
2026	19.0	13.5	15.2	33.0	61.6	13.4	94.1
Growth							
1981-91	1.5	2.7	3.0	2.2	2.6	2.4	2.2
1991-01	0.2	2.0	1.8	2.2	2.0	1.9	1.4
2001-11	-1.4	1.2	1.5	2.7	1.9	3.5	1.1
2011-21	-0.7	-1.6	1.2	2.0	0.8	3.8	0.8
2021-06	-0.7	-1.0	-1.3	1.7	0.3	3.7	0.5

Note: Population in millions; Growth is compound annual growth rate (CAGR) presented in % form.

Source: Census of India, RGI.

An expected advantage with the demographic dividend of bulging working age population is the reducing dependency ratio. Usually the dependency ratio is seen with respect to the ratio of dependent population (5-14 age child and 60+ old age population) to the working age population. The advantage of reducing dependency ratio with changing distribution of population in favour of bulging in the working age population can be seen in both the scenarios of increasing and declining size of the overall population. In the positive rate of growth scenario the lower rate of growth in dependent population than that of working age population ensures the bulging working age population. Similarly, in the negative growth scenarios the higher rate of decline in dependent population than that of working age population also ensures the bulging working age population.

Table 2.2: Dependency Ratio in Andhra Pradesh

Dependent Age Group	1981	1991	2001	2011	2016	2021	2026
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
Child pop (0-14)	70	63	53	38	35	33	31
Old age (60+)	12	12	12	14	16	18	22
Both child and old	83	75	65	52	50	51	53
Share of Child pop (%)	85.3	84.1	81.8	73.4	68.7	63.9	58.7

Note: Dependency ratio indicates the number of person in dependent age group per every 100 persons in the working age group.

Source: Calculated using above Table 3.1

The dependency ratio in the state has shown a declining trend during 1981-2016 and thereafter it is showing an increasing trend. In 1981 there were 83 persons in dependent age group (0-14 and 60+ age) for every 100 person in the working age group (15-59 age) and by

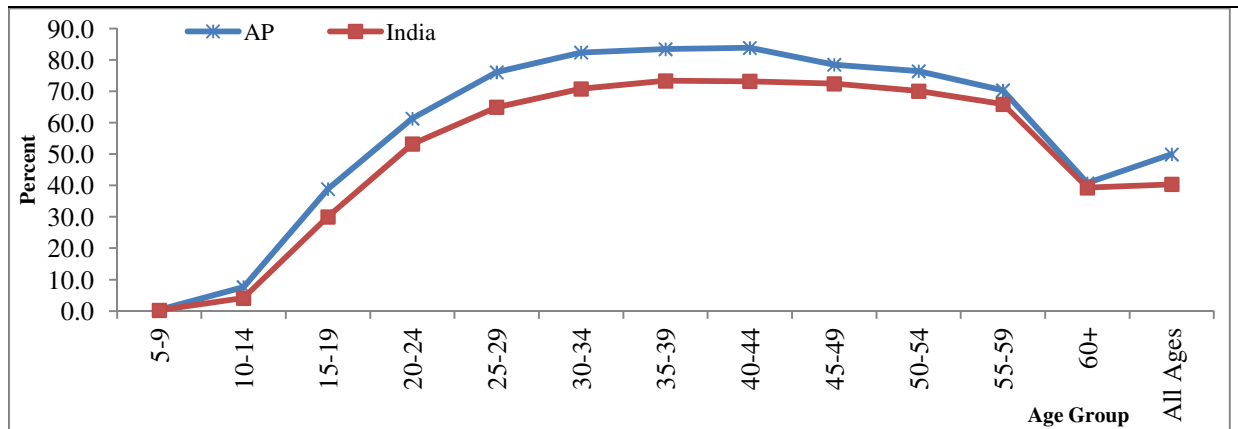
2016 the ratio would be reduced to 50 persons for every 100. When we decompose the overall dependent population into child and old age population, while the ratio of child population to the working age population (15-59) is continuously declining over a period of time but the ratio of old age to the working age population is set to increase. The share of child population in dependent population is declining over a period with a corresponding increase in the share of old age.

At this juncture one may say that changing distribution and thereby rates of growth in population in the state is in favour of bulging working age population. The available projections also indicate that the advantage of bulging working age population would be missing in the very near future in the state. Moreover the state will have to bear the burden of aging – increasing share of old age population. Thus it must be a policy concern in the state and it has to set appropriate policy measures to utilise and garner the advantages of demographic dividend.

III Harnessing the Demographic dividend

To take advantage of the demographic dividend realised in the state, it needs to convert the demographic dividend into quality labour force and create/generate employment opportunities for them. The work participation rate (WPR) in Andhra Pradesh has been higher than that of the all India average. The latest NSSO 64th round (2007-08) survey on Employment and Unemployment estimate shows that the WPR of the state is 49.9% and for the country as a whole it is 40.2%. Across age group the WPR in AP is relatively higher than all-India average. If one modifies the dependency ratio in terms of the ratio of non-working persons to working persons in the working age population, the dependency ratio in the state is lower than that of the ratio at all-India level. Moreover, Andhra Pradesh is one of the states with highest WPR among the Indian states.

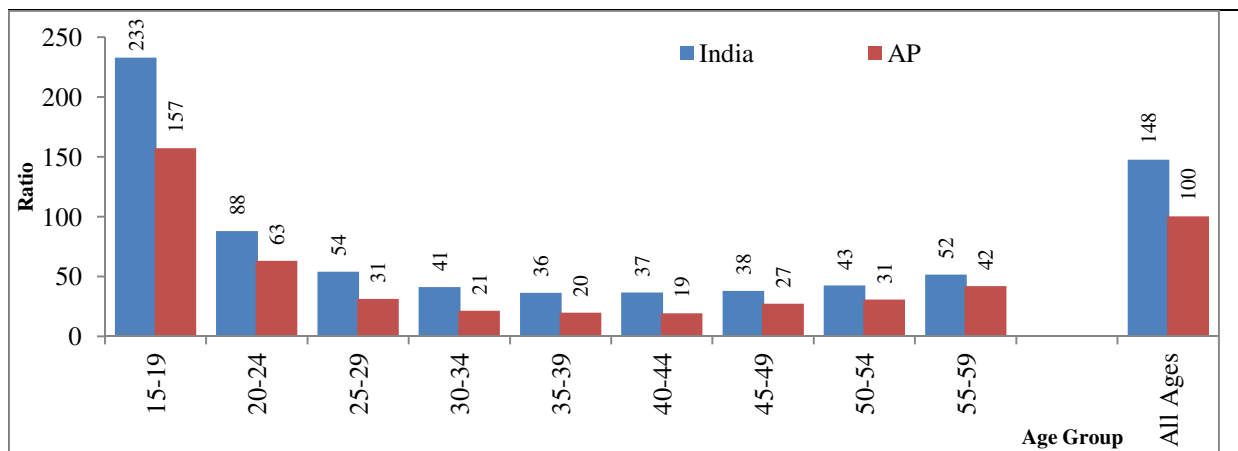
Figure 3.1: Working Participation Rates (WPR) across Age groups, 2007-08



Source: Source: NSSO 64th Round (2007-08) Employment and Unemployment (Sch. 25.2)

Given the fact that already about half of the population in the state engages in economically gainful activities, thus the concern is whether the state economy can be able to facilitate the upcoming potential labour force and generate additional employment opportunities for them. Again, it is not only the quantity of labour force but the quality and thereby productivity of the labour force that makes difference in the development process. Therefore the concern is improvement in quality of the reserve of upcoming potential labour force. The improvement in quality of labour has direct implications for the economic status and well-being at the household level and growth of economy at the macro level. The improved quality of labour force increases the productivity of the labour and thereby their earnings.

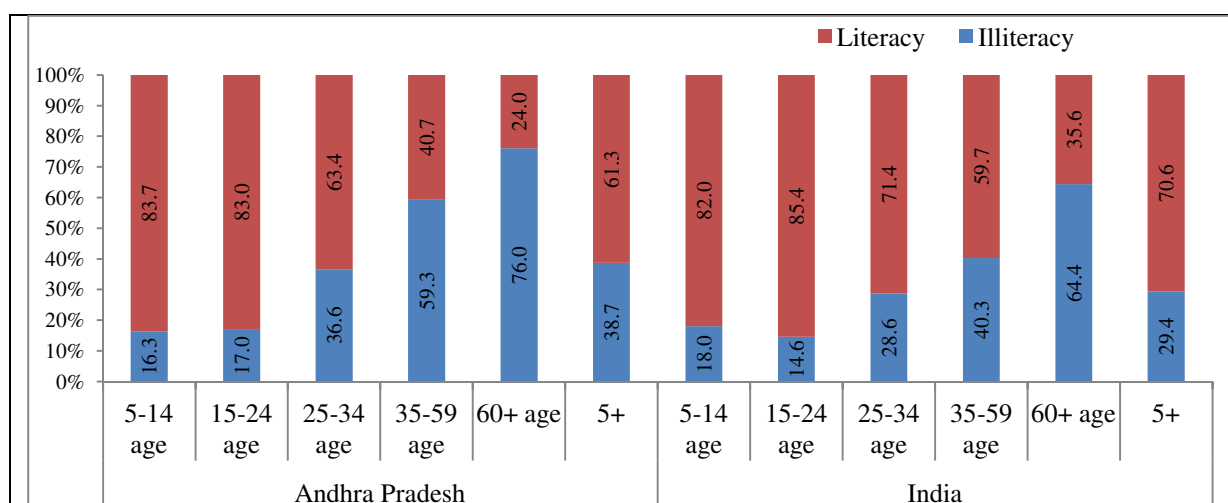
Figure 3.2: Dependency Ratio within the working age population, 2007-08



Source: Source: NSSO 64th Round (2007-08) Employment and Unemployment (Sch. 25.2)

The basic minimum quality factor for the population in the human development perspective as well as for labour force in the productivity perspective in any economy is literacy level. But Andhra Pradesh is considered to be one of backward states in India in terms of literacy rates. Although the literacy levels in the younger age groups are higher than older age group and thereby indicating improvement in literacy levels in the state over a period, when compared to all-India the state is having relatively lower literacy rates across age groups (Figure 3.3). For the 5+ age group population the literacy rate is 61% and it is 10% points lower than all-India average (71%).

Figure 3.3: Percentage of Literates in population by Age Group, 2007-08



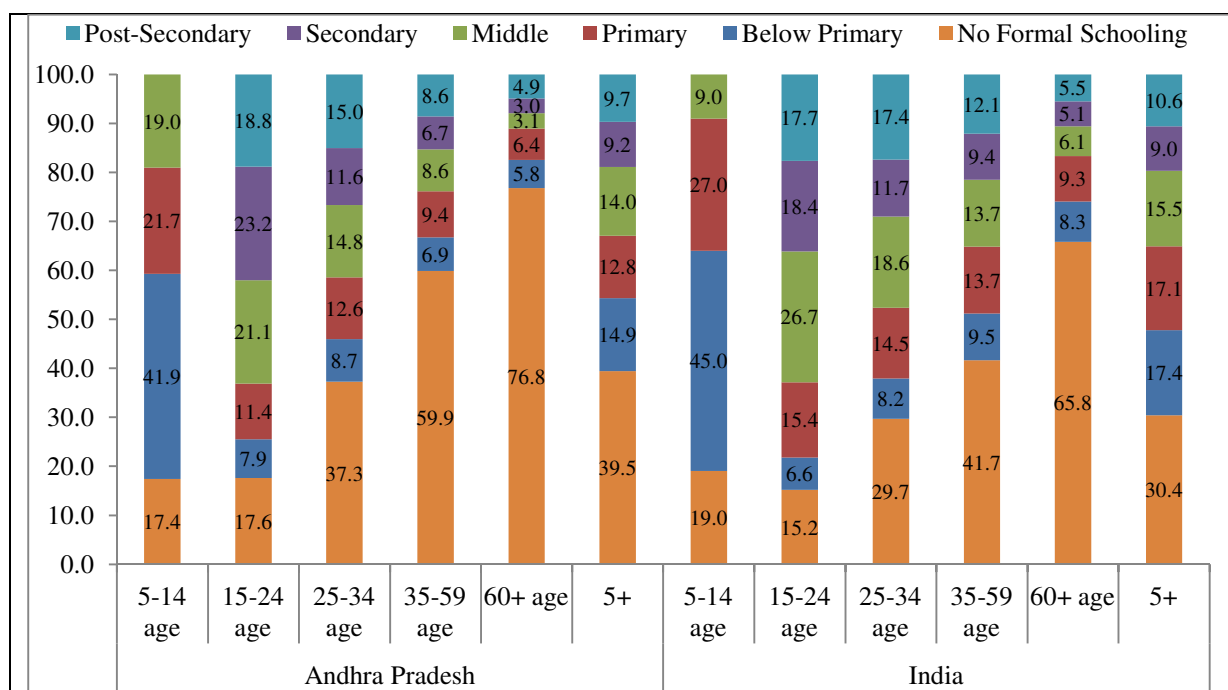
Source: NSSO 64th Round (2007-08) Employment and Unemployment (Sch. 25.2)

Beyond literacy level, the educational levels are important for the quality of population as well as labour force. In Andhra Pradesh for the older age groups/cohorts (60+) more than three-fourths of population did not have any kind of formal schooling and in the younger age cohorts it is less than one-fifth of the respective age group population which did not have formal schooling. It indirectly indicates that over a period the proportion population without formal school has been declining in the state and there is a corresponding increase in the population having formal schooling. However, when compared to all-India averages across age cohorts the percent of population without formal schooling is higher in the state.

Similarly, literacy levels among the adult workers (15+ age person in the workforce) indicate that about half of the workforce in the state is illiterates (Table 3.1). But the higher literacy levels among younger age cohort workers than that of older age cohorts indicates the improvement over a period. Similarly, with respect to the formal schooling, about half of the

adult workers in the state did not have any kind of formal schooling. When compared to all-India average, the literacy level and formal schooling level among workers in the state are lower.

Figure 3.4: Levels of Education in the population by Age Group, 2007-08



Source: NSSO 64th Round (2007-08) Employment and Unemployment (Sch. 25.2)

Table 3.1: Educational Level among Workers by Age Group

Education Level	Andhra Pradesh					All India				
	15-24	25-34	35-59	60+	15+	15-24	25-34	35-59	60+	15+
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
Literacy										
Illiteracy	24.4	39.4	61.2	74.9	48.9	19.3	27.9	42.2	62.7	35.7
Literacy	75.6	60.6	38.8	25.1	51.1	80.7	72.1	57.8	37.3	64.3
All	100	100	100	100	100	100	100	100	100	100
Formal Schooling										
No Formal Schooling	25.1	40.1	61.7	75.2	49.5	20.0	28.9	43.5	64.2	36.8
Below Primary	11.1	9.5	6.8	7.3	8.5	9.5	8.4	9.1	9.3	9.1
Primary	17.1	12.6	8.6	8.5	11.5	20.4	15.2	13.0	11.0	15.0
Middle	21.1	14.0	8.2	3.8	11.9	26.4	19.1	13.1	6.3	16.6
Secondary	16.3	10.4	6.0	2.0	8.8	12.4	11.6	8.9	4.7	9.9
Post Secondary	9.3	13.5	8.7	3.2	9.7	11.3	16.9	12.4	4.5	12.7
All	100	100	100	100	100	100	100	100	100	100

Note: Workers – Usual principal and subsidiary status.

Source: Source: NSSO 64th Round (2007-08) Employment and Unemployment (Sch. 25.2)

On the whole the above analysis indicates the demographic dividend of the state at present is relatively higher than that of the country average. But the relative advantage of the state may not last for longer time as the proportion of younger age adult cohorts in the distribution is declining faster in the state than that the all-India average. The entry of lower size younger age cohorts into working age group in the state and the cohorts' transit through the working age group over a period reduces the state's relative advantage. Therefore the state has to take advantage of demographic dividend whatever remained to date and garner the advantage of it as early as possible.

Definitely bulging working age population is a demographic dividend and advantage for the growth of economy. However, it may turn into liability/disadvantage unless and until it is properly harnessed. The demographic dividend may turn into over surplus labour and led to unemployment and under employment or disguised unemployment and ultimately to social unrest and chaos.

IV Aging Population – The Burden

The main macro demographic effect that comes through the demographic transition usually is reduction in population growth rate and resultant changes in the age structure of the population. In the process, the developed countries moved baby boom to the burden of aging. The developing countries, such as India, are also moving in the same line. The declining trend in mortality rate and increased life span owing improved access health care would contribute to growing size of aged people. In the policy perspective, the state has to design a policy and be prepared to take care of the old-age people and attend the socio-economic problems associated with old age. The severity of the problem depends upon the endowment of human capital (in terms of health and skills) of the old. Andhra Pradesh as well as India is facing the problem of *ageing without human capital endowment* (APHDR, 2007).

In India, as per Census enumeration, there were about 24.7 million aged people (age 60 years and above) comprised 5.6 per cent of the total population in 1961 and it is increased seven times to 70.7 million (consists of 7.1 per cent) by 2001. In Andhra Pradesh too, the aged population increased from 2.2 to 5.6 millions during 1961-2001, a six times increase. In terms of the percentage of aged to total population increased from 6.2 to 7.3% during the period. The RGI projections indicate that the aged population would increase further in the first

quarter of the 21st Century. The growth of aged population would be significantly higher in the first quarter of the 21st century when compared to that of last five decades of 20th Century.

Table 4.1: Size and Growth of Old age (60+) Population

Year	All-India			Andhra Pradesh			
	Population	Growth	% in TP	Population	% in India	Growth	% in TP
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
1951	19.6 M	-	5.4				
1961	24.7 M	2.3	5.6	2.2 M			
1971	32.7 M	2.8	6.0				
1981	43.2 M	2.8	6.3	3.5 M	8.2		6.6
1991	56.7 M	2.8	6.7	4.5 M	8.0	2.4	6.8
2001	70.7 M	2.2	6.9	5.5 M	7.7	1.9	7.2
2011*	98.5 M	3.4	8.3	7.7 M	7.8	3.5	9.1
2016*	118.1 M	3.7	9.3	9.2 M	7.8	3.7	10.5
2021*	143.3 M	3.9	10.7	11.2 M	7.8	3.8	12.2
2026*	173.2 M	3.9	12.4	13.4 M	7.7	3.7	14.2

Note: * Projections; **M** - Population in millions; **Growth** is compound annual growth rate (CAGR); **TP** – Total Population; **% in India** – Percent of aged (60+) population in AP to the total aged population in India.

Source: Census of India and RGI Projections.

The burden of ageing appears to be higher in Andhra Pradesh than the all-India average not only as the share of old age population in the total population of the state is higher when compared to that of the national average but also in terms of human capital endowments of the aging population in the state. Most of the aging population in the state are illiterates and without any formal schooling.

V Policy Concern

In the Andhra Pradesh state context one of lacunae in harnessing the demographic dividend is low levels of literacy and educational levels of the population especially in the working age population. In this regard the state policy has to focus on improving the literacy and educational levels in the population. Although for the younger age the literacy level and attendance in educational institutions is relatively better in the state than that of all-India average, for adult age group there is a relative disadvantage for the state. In this regard the policy measure can be adult literacy and education programmes.

More than education it is skill development that meets industry demand. Therefore there is need for quantitative expansion and qualitative improvement in the technical education. In addition to usual general academic and technical courses there must be training and skill

development programme with a content of updated skills that industry demands. To meet the industry demand for the skilled labour Skill Development Programmes must be designed for developing occupational and technical skills required. Instead of letting unskilled labour enter into labour force, their entry may be delayed for short period and in the meantime letting them to have better equipped with occupational and technical skills through skill development programme or training programme. Besides it is equally important is developing entrepreneurship.

VI Summary

The changing demographic features of the state are decline in the rate of growth in the population, improving sex ratio, declining size of younger age cohorts owing to negative rate of growth, increasing size of the working and older age groups.

The demographic transition took place in the state is remarkable and it is beyond the explanatory factors of classical theories. Early commencement of faster decline in death rate in 1960s than that of birth rate widened the gap between birth and death rates (i.e. increased the natural growth) during 1960s, 1970s and resulted in high growth of population in 1980s. The increasing survival chances of children due to faster decline in mortality especially in infant mortality rate resulted in faster rate of decline in birth rate since mid 1980s. The faster decline in birth rate and slow down in rate of decline in death rate reduced the gap between in birth and death rates (i.e. decline in natural growth) resulted in decline in rate of growth of population since 1990s. The fertility transition in the state owing high contraceptive prevalence rate among the currently married women in reproductive age group and their higher exposure to family planning methods through media is a remarkable one. Uniqueness of the transition in the state is that it almost homogeneous across sub-population groups distinguished socio-economic characteristics.

A consequence of demographic transition is the change in distribution of population across age structures in the state. The importance of change in the distribution of population is bulging proportions of working age (15-59 years age group) population referred as demographic dividend. In fact the bulging proportion of working age population in the state is higher than that of all India average. Therefore the state is having relatively higher demographic dividend than the average at the country level. But the concern is harnessing the demographic dividend by converting it into the quality labour force. Therefore, it must be the

concern of the policy and appropriate measures must be taken to garner the demographic dividend. Besides, the growing old age population also needs policy attention so the state has to design policy measure to address old age related problems.

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End Notes

¹ Although about 31 per cent of the population living in Andhra Pradesh is characterized as migrants only about one per cent in the total population and 4.5 per cent of the total migrants were born outside Andhra Pradesh. The 2001 Census classifies about 2.3 crore people in Andhra Pradesh as migrants of whom about 0.23 lakh were reportedly born abroad and about 10.6 lakh people were born within India but not in the state.

² For instance see James (1999); James and Subramanian (2005); Bhat (2002).