Demographic Challenges and Opportunities in the economically marginalized economy

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Abstract: *This paper discusses emerging demographic patterns and its opportunities and challenges for U.P. Demographic change in India is opening up new economic opportunities. As in many countries, declining infant and child mortality helped to flash lower fertility, effectively resulting in a temporary baby boom. Moreover, changes in population age structure have opened the door to increased prosperity. Uttar Pradesh is the most populous state in India with a population of 199,581,477 million people as of 1 March 2011. If it were a separate country, Uttar Pradesh would be the world's fifth most populous nation, next only to China. Population growth of Uttar Pradesh in 2011 is 20.09%, Sex Ratio is 908 in 2011. Economic and demographic factors reveal important and significant influences*

Demographics. It presents some opportunities that can arise from having demographic changes, particularly the demographic dividend and interstate migration to overcome labour shortage in some parts. At the same time, there are serious challenges in the form of enhancing human capital development, addressing the issue of tilted sex ratio, and the possible rise in social and political unrest and conflict. Economic growth itself will be correlated to the age structure of the population. In this report we present an in-depth analysis on demographic change and economic growth & the research is exploratory in nature.

This paper is based on a limited initial review of the literature and provides a brief summary of the theoretical part of the study. It should be regarded as a research proposal of an ongoing research project and as such it may develop and change in the process.

Keywords: *transition, literacy, sex-ratio, poverty, population growth.*

## I.   Introduction

Demographers refer to these changes from stable population with high fertility and mortality to a new stability in population due to low fertility and mortality patterns as demographic transition. Demographic transition occurs in four phases; of these the first three phases are characterized by population growth.

- In the first phase there is a fall in death rate and improvement in longevity; this leads to population growth.
- In the second phase there is a fall in birth rate but fall is less steep than fall in death rates and consequently there is population growth.
- In the third phase death rates plateau and replacement level of fertility is attained but the population growth continues because of the large size of population in reproductive age group.
- The fourth phase is characterized by fall in birth rate to below replacement level and reduction in the proportion of the population in reproductive age group; as a result of these changes population growth ceases and population stabilizes.
- Experience in some of the developed countries suggest that in some societies even after attainment of stable population there may be a further decline in fertility so that there is a further reduction in the population- so called negative population growth phase of the demographic transition. Different countries in the world have entered the demographic transition at different periods of time; there are also substantial differences in the rate of demographic transition and time taken to achieve population stabilization.
- Uttar Pradesh data

Description	2011	2001
Approximate Population	19.95 Crore	16.62 Crore
Actual Population	199,581,477	166,197,921
Male	104,596,415	87,565,369
Female	94,985,062	78,632,552

Population Growth	20.09%	25.80%
Percentage of total Population	16.49%	16.16%
Sex Ratio	908	898
Child Sex Ratio	899	942
Density/km2	828	690
Density/mi2	2,146	1,787
Area km2	240,928	240,928
Area mi2	93,023	93,023
Total Child Population (0-6 Age)	29,728,235	31,624,628
Male Population (0-6 Age)	15,653,175	16,509,033
Female Population (0-6 Age)	14,075,060	15,115,595
Literacy	69.72 %	56.27 %
Male Literacy	79.24 %	67.30 %
Female Literacy	59.26 %	43.00 %
Total Literate	118,423,805	75,719,284
Male Literate	70,479,196	48,901,413
Female Literate	47,944,609	26,817,871
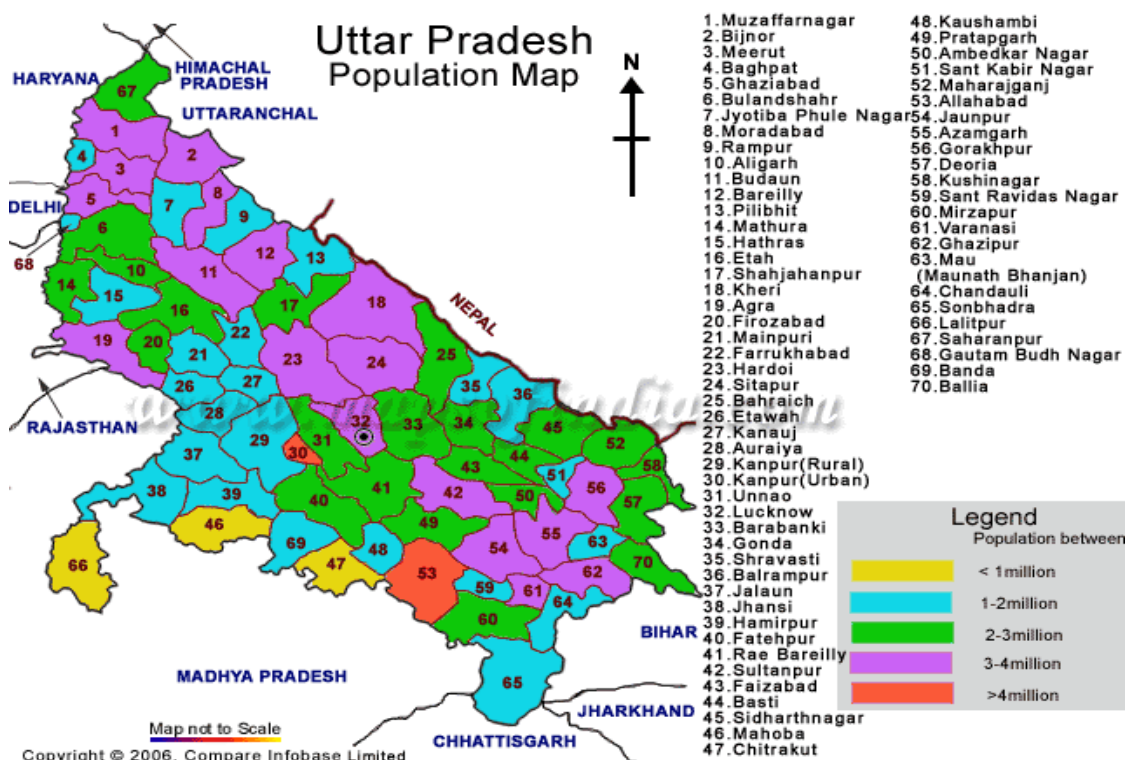
Uttar Pradesh has an economy that is well divided between industrialization and agriculture. At the same time the par capita income rate is also lower than most other states of India. Most of the occupational groups within the population of Uttar Pradesh are involved in agriculture, which contributes to 41 per cent of the state's economy. Unskilled labourers form a major portion of he work force. Skilled labours are sought after in the urban centres of the state which are experiencing a tremendous growth specially in the information technology

and the telecommunications sector. However, the level and pace of urbanization has been slow in Uttar Pradesh, compared to other parts of India.

Uttar Pradesh, the most populous of all Indian States, is also the fifth largest state in India. The state covers a total area of 243,286 km2 with population density of 792 per km square. The inability to manage the state efficiently as a collective unit, owing to its large area has already resulted into splitting of state on more than one occasion and if the central government gives a nod it will further be divided into four small states. The state at present is divided into 18 divisions which further has 71 districts.

The Uttar Pradesh district map by maps of india will help you locate all the districts in the state of Uttar Pradesh. Lakhimpur Kheri is the largest district in the state of Uttar Pradesh and it covers an area of 7680 km2. The district comes under the Lucknow Division of UP which also covers Hardoi , Raebreli, Sitapur and Unnao districts along with the city of Lucknow which is the capital city after Sant Ravidas Nagar located to the South of the state is the smallest district in the state of Uttar Pradesh in terms of area. Allahabad district of Uttar Pradesh is the most populous district in the state. The population of the district at present is approximately 5,959,798. Allahabad is situated to the South of Uttar Pradesh and covers districts of Fatehpur, Kaushambi and Pratapgarh. The districts of Sahranpur and Muzzafarnagar are located to the North of Uttar Pradesh. The districts of Firozabad, Mainpuri and Mathura are located to the East of the state of Uttar Pradesh and falls under Agra Division of the state. Azamgarh Division includes Ballia and Mau districts and is located to the east of the state of uttar Pradesh this is the clear view taken from the census 2011

Aligarh Division covers districts like Etah, Mahamaya Nagar and Kanshiram Nagar. Bareilly Division covers District Badaun, District Pilibhit and District Shahjahanpur while District Banda, District Hamirpur and District Mahoba fall under Chitrakoot Division. The Jhansi division of Uttar Pradesh covers districts like Jalaun and Lalitpur which are located to the South West of the state. Also located in the zone is the Lalitpur district which is the district with least population density i.e.194 people per square km.

State/UT Code	District Code	State/UT	District	Total population	Males	Females
9	1	Uttar Pradesh	Saharanpur	3464228	1835740	1628488
9	2	Uttar Pradesh	Muzaffarnagar	4138605	2194540	1944065
9	3	Uttar Pradesh	Bijnor	3683896	1925787	1758109
9	4	Uttar Pradesh	Moradabad	4773138	2508299	2264839
9	5	Uttar Pradesh	Rampur	2335398	1226175	1109223
9	6	Uttar Pradesh	Jyotiba Phule Nagar	1838771	964319	874452
9	7	Uttar Pradesh	Meerut	3447405	1829192	1618213
9	8	Uttar Pradesh	Baghpat	1302156	700724	601432
9	9	Uttar Pradesh	Ghaziabad	4661452	2481803	2179649
9	10	Uttar Pradesh	Gautam Buddha Nagar	1674714	904505	770209
9	11	Uttar Pradesh	Bulandshahr	3498507	1848643	1649864
9	12	Uttar Pradesh	Aligarh	3673849	1958536	1715313
9	13	Uttar Pradesh	Mahamaya Nagar	1565678	837446	728232
9	14	Uttar Pradesh	Mathura	2541894	1368445	1173449
9	15	Uttar Pradesh	Agra	4380793	2356104	2024689
9	16	Uttar Pradesh	Firozabad	2496761	1337141	1159620
9	17	Uttar Pradesh	Mainpuri	1847194	984892	862302
9	18	Uttar Pradesh	Budaun	3712738	1997242	1715496

9	19	Uttar Pradesh	Bareilly	4465344	2371454	2093890
9	20	Uttar Pradesh	Pilibhit	2037225	1078525	958700
9	21	Uttar Pradesh	Shahjahanpur	3002376	1610182	1392194
9	22	Uttar Pradesh	Kheri	4013634	2126782	1886852
9	23	Uttar Pradesh	Sitapur	4474446	2380666	2093780
9	24	Uttar Pradesh	Hardoi	4091380	2204264	1887116
9	25	Uttar Pradesh	Unnao	3110595	1636295	1474300
9	26	Uttar Pradesh	Lucknow	4588455	2407897	2180558
9	27	Uttar Pradesh	Rae Bareli	3404004	1753344	1650660
9	28	Uttar Pradesh	Farrukhabad	1887577	1007479	880098
9	29	Uttar Pradesh	Kannauj	1658005	882546	775459
9	30	Uttar Pradesh	Etawah	1579160	845893	733267
9	31	Uttar Pradesh	Auraiya	1372287	736144	636143
9	32	Uttar Pradesh	Kanpur Dehat	1795092	964284	830808
9	33	Uttar Pradesh	Kanpur Nagar	4572951	2469114	2103837
9	34	Uttar Pradesh	Jalaun	1670718	895804	774914
9	35	Uttar Pradesh	Jhansi	2000755	1061310	939445
9	36	Uttar Pradesh	Lalitpur	1218002	639392	578610
9	37	Uttar Pradesh	Hamirpur	1104021	593576	510445
9	38	Uttar Pradesh	Mahoba	876055	465937	410118
9	39	Uttar Pradesh	Banda	1799541	966123	833418
9	40	Uttar Pradesh	Chitrakoot	990626	527101	463525
9	41	Uttar Pradesh	Fatehpur	2632684	1385556	1247128
9	42	Uttar Pradesh	Pratapgarh	3173752	1591480	1582272
9	43	Uttar Pradesh	Kaushambi	1596909	838095	758814
9	44	Uttar Pradesh	Allahabad	5959798	3133479	2826319
9	45	Uttar Pradesh	Bara Banki	3257983	1707951	1550032
9	46	Uttar Pradesh	Faizabad	2468371	1258455	1209916
9	47	Uttar Pradesh	Ambedkar Nagar	2398709	1214225	1184484
9	48	Uttar Pradesh	Sultanpur	3790922	1916297	1874625
9	49	Uttar Pradesh	Bahraich	3478257	1838988	1639269
9	50	Uttar Pradesh	Shrawasti	1114615	594318	520297

9	51	Uttar Pradesh	Balrampur	2149066	1117984	1031082
9	52	Uttar Pradesh	Gonda	3431386	1785629	1645757
9	53	Uttar Pradesh	Siddharthnagar	2553526	1296046	1257480
9	54	Uttar Pradesh	Basti	2461056	1256158	1204898
9	55	Uttar Pradesh	Sant Kabir Nagar	1714300	870547	843753
9	56	Uttar Pradesh	Mahrajganj	2665292	1375367	1289925
9	57	Uttar Pradesh	Gorakhpur	4436275	2281763	2154512
9	58	Uttar Pradesh	Kushinagar	3560830	1821242	1739588
9	59	Uttar Pradesh	Deoria	3098637	1539608	1559029
9	60	Uttar Pradesh	Azamgarh	4616509	2289336	2327173
9	61	Uttar Pradesh	Mau	2205170	1114888	1090282
9	62	Uttar Pradesh	Ballia	3223642	1667557	1556085
9	63	Uttar Pradesh	Jaunpur	4476072	2217635	2258437
9	64	Uttar Pradesh	Ghazipur	3622727	1856584	1766143
9	65	Uttar Pradesh	Chandauli	1952713	1020789	931924
9	66	Uttar Pradesh	Varanasi	3682194	1928641	1753553
9	67	Uttar Pradesh	Sant Ravidas Nagar (Bhadohi)	1554203	797164	757039
9	68	Uttar Pradesh	Mirzapur	2494533	1312822	1181711
9	69	Uttar Pradesh	Sonbhadra	1862612	973480	889132
9	70	Uttar Pradesh	Etah	1761152	945157	815995
9	71	Uttar Pradesh	Kanshiram Nagar	1438156	765529	672627
9	0	Uttar Pradesh	Total	199581477	104596415	94985062

In Uttar Pradesh, about 71 districts and cities have been identified as gender critical because here sex ratio is less than 900. Moreover, while in 10 districts, the female literacy rate is less than 30 per cent, in 41 districts, women work participation is less than 20 per cent.

In several surveys and past census, it has been noticed that people — particularly in rural areas — ignore infants, children and elderly women, while giving details about family composition and work profile during enumeration. "To ensure an accurate enumeration of women in Census 2011, special attention is being given to gender sensitisation among the public and enumerators.

II.   Objectives
- Identifying current scenario in demographics of U.P. state and districts population in 2011
- Comparison of U.P. state with other state in respect of demography.
- Reasons for significant fall in the growth rate of population in the U.P.
- Fall in the share of child population: Causes and Consequences
- Identifying Inter-state variations in literacy.
- Bringing out suggestions for exploring growth opportunities in U.P.

Top 5 States/UTs

Top 5 States/UTs		Bottom 5 States/UTs	
Uttar Pradesh	19,95,81,477	Lakshadweep	64,429
Maharashtra	11,23,72,972	Daman & Diu	2,42,911
Bihar	10,38,04,637	D. & N. Haveli	3,42,853
West Bengal	9,13,47,736	A. & N. Islands	3,79,944
Andhra Pradesh	8,46,65,533	Sikkim	6,07,688

During 2001-2011, as many as 25 States/UTs with a share of about 85% of the country's population registered an annual growth rate of less than 2% as compared to, 15 States/UTs with a share of about 42% during the period 1991-2001and 15 States/UTs have grown by less than 1.5 percent per annum during 2001-2011, while the number of such States/UTs was only 4 during the previous decade.

The percentage decadal growth rates of the six most populous States have declined during 2001- 2011 compared to 1991-2001:
• Uttar Pradesh (25.85% to 20.09%)
• Maharashtra (22.73% to 15.99%)
• Bihar (28.62% to 25.07%)
• West Bengal (17.77% to 13.93%)
• Andhra Pradesh (14.59% to 11.10%)
• Madhya Pradesh (24.26% to 20.30%)

Now the 2011 census has shown a clear fall, to a decadal growth of 17.6 percent and annual rate of 1.62 percent. In fact, not just the growth rate but the absolute increase has also shown a decline, from 182million during 1991-2001 to 181 million during 2001-11.
•Clearly, India's trajectory of growth has turned downward though the population trajectory continues to be upward.

Trends in population size and growth rate, India, 1901-2011
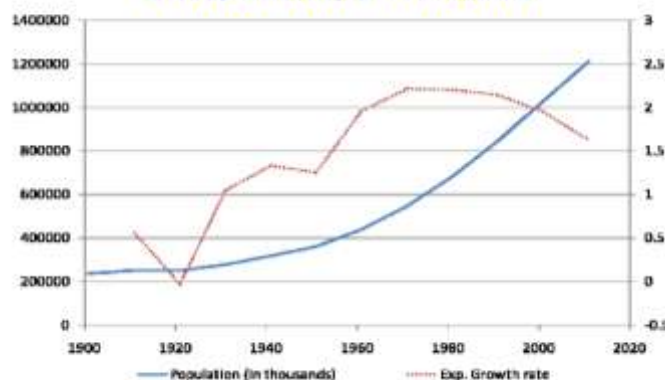
Population prospects

With birth rates now falling faster than death rates, growth rate has begun to decline and India has advanced well into this phase of the demographic transition.
•India's population will continue to grow for some time overtaking China in 15-20 years but the growth rate is projected to fall further and population growth slow down.
•According to various projections, the size would reach 1.6-1.8 billion in the second half of the century and then begin to decline.
Fall in the share of child population
•The provisional results do not give detailed age distribution of population. However, the size (and hence share) of the population in ages 0-6 is available.
•The share of the population in ages 0-6 (that is, below seven years) has fallen, from 15.9 percent in 2001 to only 13.1 percent in 2011; such decline occurred between 1991 and 2001 as well.
•The fall has occurred in almost all the states (Jammu & Kashmir is an exception) but the degree varies.

Fall in the share of child population: **Causes and Consequences**
•This is clearly a consequence of recent fertility decline. Independent evidences from the Sample Registration System and various surveys also show impressive decline in fertility in all parts of the country, though at varying degrees. Fertility transition is clearly in progress in India.
•A positive consequence of the fertility decline is that the young age dependency has fallen. Thus couples can devote greater resources including time for each child; the classical quality-quantity trade-off.
At the societal level, this means enhanced ability to invest in child development with positive implications in the next generation.
•In the long run, the share of elderly is bound to rise. But until then, India can harvest the demographic dividend.
•The window of demographic opportunity has already opened and will remain so for the next few decades; however, given the spatially varied timing of the decline, the dividend would also be staggered.

As in virtually all countries, life expectancy at birth in India also differs by sex. In the period 2005-2010, female life expectancy was 65.0 years, and male life expectancy was 62.1 years – very similar to the differences that are seen in developing countries as a whole and in the world. However, India differs from the world and from developing countries as a whole in the manner in which sex differences in life expectancy have evolved since 1950. In most countries, women lived longer than men in 1950, whereas in India female life expectancy, at 37.1 years, was 1.6 years less than that of men. This differential has reversed in the intervening years. (United Nations, 2009)

India's demographic changes are also manifest in its age structure. The population pyramids of Figure 5 show the share of population in each age group, separately for males and females. In 1950, India had a very young population, with many children and few elderly; this gave India's age distribution a pyramidal shape. Moving forward in time, the base of the population pyramid shrinks as the number of working-age individuals increases relative to children and the elderly.

Sex ratio in population
•Sex ratio in India's population worsened through the twentieth century, reaching a low of 927 females per 1000 males (or 107.9 M/100F)in 1991. Some improvement was seen in 2001 and the 2011 census shows further rise to 940(106.4 M/100F). This ratio is still more masculine than the global level but has moved in the direction of balance.
•Three reasons may be stated: 1. Women are no longer disadvantaged in survivalin contrast to the situation some time back, 2. The age structure is changing with share of older ages, where sex ratio favours females, rising, and 3. Selective female under-enumeration has declined. A systematic demographic analysis of age-sex distributions, once these become available, can reveal the relative contributions of these factors.

Literacy
•Literacy (measured for population of ages 7 and above) has been rising steadily and the 2011 census shows continuation of the trend, from 65 % in 2001 to 74 % in 2011.
•Though gender gap persists (82 % for males and 65 % for females),it is narrowing; in the recent period, the improvement in female literacy has been greater than in male literacy.

Inter-state variations in literacy
•The level of literacy varies substantially across states. Literacy is now quite high (over 90 percent) in Kerala, Lakshadweep and Mizoram, and high (80-90 %) in Tripura, Goa, Daman & Diu, Puducherry , Delhi, Chandigarh, Himachal Pradesh, Maharashtra, Tamil Nadu, and Nagaland.
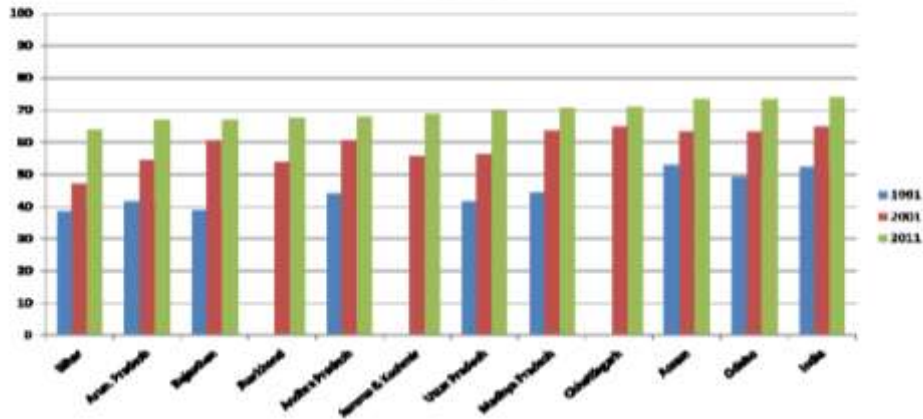•The level is relatively low (below 70 percent) in Bihar, Arunachal Pradesh, Rajasthan, Jharkhand, Andhra Pradesh, Jammu & Kashmir and Uttar Pradesh.
•In 2011, the gender gapis found to be high in Rajasthan, Jharkhand, Chhattisgarh, Dadra & Nagar Haveli, Madhya Pradesh, Jammu & Kashmir, and Bihar.
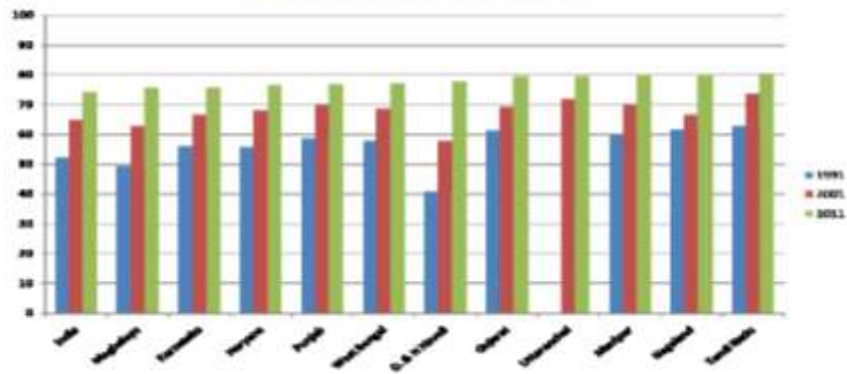•As expected, states with low levels have shown more progress than those with high levels (the latter are approaching universal level and further progress cannot be much).

Progress in literacy: low literacy states

Figure-11

Population Projections
(Region Wise)
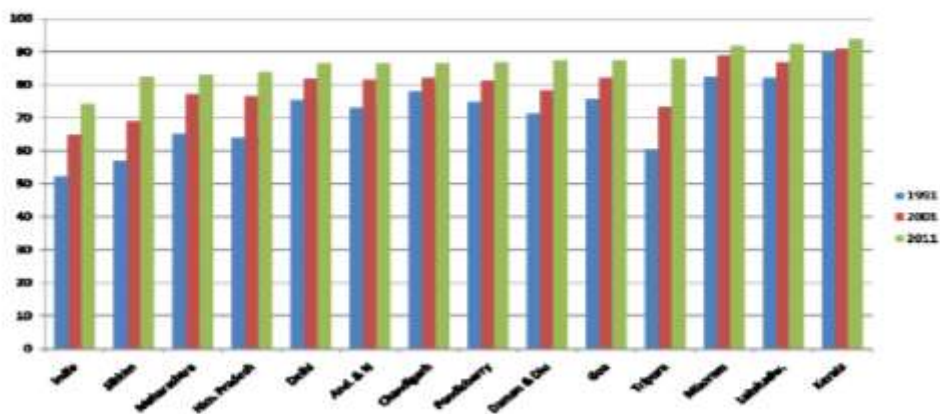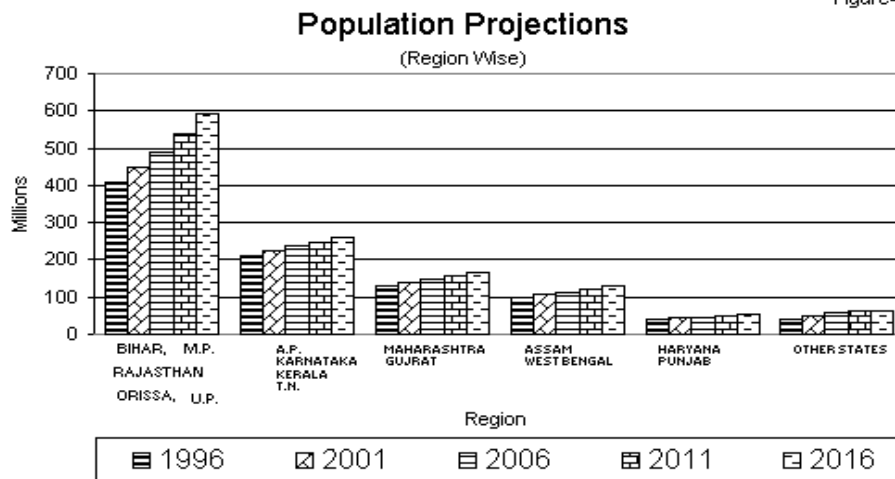

Source: Registrar General India

Interstate differences:

The projected values for the total population in different regions is shown in above Figure. There are marked differences between States in size of the population and population growth rates , the time by which replacement level of fertility (TFR of 2.1) is to be achieved and age structure of the population, If the present trend continues, most of the Southern and the Western States are likely to achieve TFR of 2.1 by 2010. Urgent energetic steps to assess and fully meet the unmet needs for maternal and child health (MCH) care and contraception through improvement in availability and access to family welfare services are needed in the States of UP, MP, Rajasthan and Bihar in order to achieve a faster decline in their mortality and fertility rates. The five states of Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan and Orissa, which constitute 44% of the total population of India in 1996, will constitute 48% of the total population of India in 2016. These states will contribute 55% of the total increase in population of the country during the period 1996-2016 (Figure-below) In all the states performance in the social and economic sector has been poor. The poor performance is the outcome of poverty, illiteracy and poor development which co-exist and reinforce each other. The quality and coverage under health services is poor and the unmet need for FW services is about 30%. Urgent energetic

steps are required to be initiated to assess and fully meet the unmet needs for maternal and child health (MCH) care and contraception through improvement in availability and access to family welfare services in the states of UP, MP, Rajasthan and Bihar in order to achieve a faster decline in their mortality and fertility rates. The performance of these states would determine the year and size of the population at which the country achieves population stabilisation.

Figure-12

Share of Regions in Population Growth
(1996-2016)
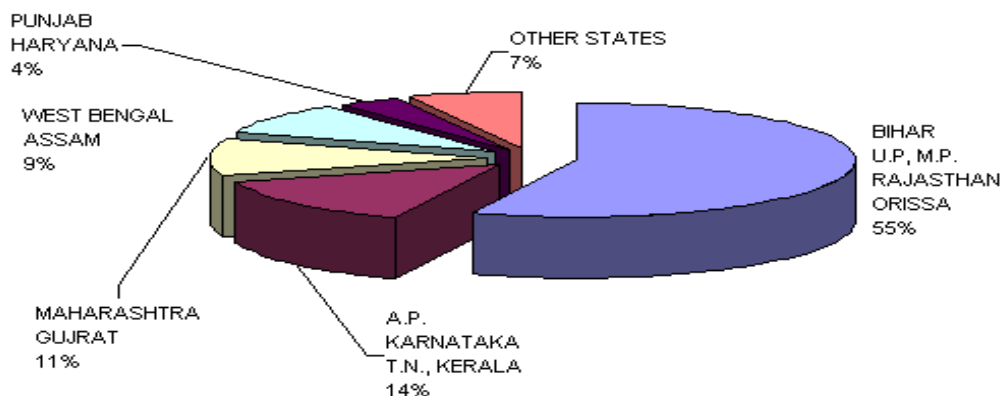
Interstate differences
There are massive interstate differences in population, population growth rates, time by which TFR of 2.1 and population stabilisation will be achieved.

These differences will have major impact on
- Health and nutritional status
- Education and skill development
- Appropriate employment with adequate emoluments
- Rural – urban and interstate migrations
- Social and economic development.

Efforts are underway to provide adequate inputs and improve performance

In these States, population growth rates are low. If equitable distribution of the income and benefits generated by development is ensured, substantial increase in per capita income and improvement in quality of life could occur in these States in a relatively short time.

In majority of States with high population growth rates, the performance in the social and economic sector has been poor. The poor performance could be the outcome of a variety of factors including paucity of natural, financial or human resources. Poverty, illiteracy and poor development co-exist and aggravate each other. In order to promote equity and reduce disparity between States, special assistance has been provided to the poorly performing States. The benefits accrued from such assistance has to a large extent depended upon:
The States' ability to utilise the available funds; improve quality & coverage of services and facilities, increase efficiency and improve performance Community awareness and ability to utilise the available services.

In spite of the additional assistance provided, improvement in infrastructure, agriculture and industry have been sub-optimal and the per capita income continues to be low in most of the poorly performing States. These States also have high birth rates and relatively low literacy rates. It is imperative that special efforts are made during the next two decades to break this vicious self perpetuating cycle of poor performance, poor per capita income, poverty, low literacy and high birth rate so that the further widening of disparities between States in terms of per capita income and quality of life is prevented.

The higher population growth rates and low per capita income in poorly performing States are likely to have a major impact on several social sector programmes. The health status of the population in these States is poor; the health sector programme will require inputs not only for improving infrastructure and manpower, but also increasing efficiency and improving performance. The Family Welfare Programme has to address the massive task of meeting all the unmet needs for MCH and contraception so that there is a rapid decline in mortality and fertility rates. Due to high birth rate, the number of children requiring schooling will be large.
The emphasis in the education sector on primary education is essential to ensure that the resource constraints do not result in an increase in either proportion or number of illiterates. Emphasis on
prevocational and vocational training in schools will enable these children to acquire skills through which they will find gainful employment later.

**The current high population growth rate is due to**:
- The large size of the population in the reproductive age-group (estimated contribution 60%);
- Higher fertility due to unmet need for contraception (estimated contribution 20%); and
- High wanted fertility due to prevailing high IMR (estimated contribution about 20%).

Rapid reduction in the population growth rate can be achieved by:
- Meeting all the felt-needs for contraception; and
- Reducing the infant and maternal morbidity and mortality so that there is a reduction in the desired level of fertility.

Case of infant mortality
– Four states
- Uttar Pradesh
- Madhya Pradesh
- Bihar
- Rajasthan
– Account for more than 50% of infant mortality in India
– Four more states account for another 21%, or a cumulative 72%

Contribution of the 21 larger states to national infant deaths, 2000
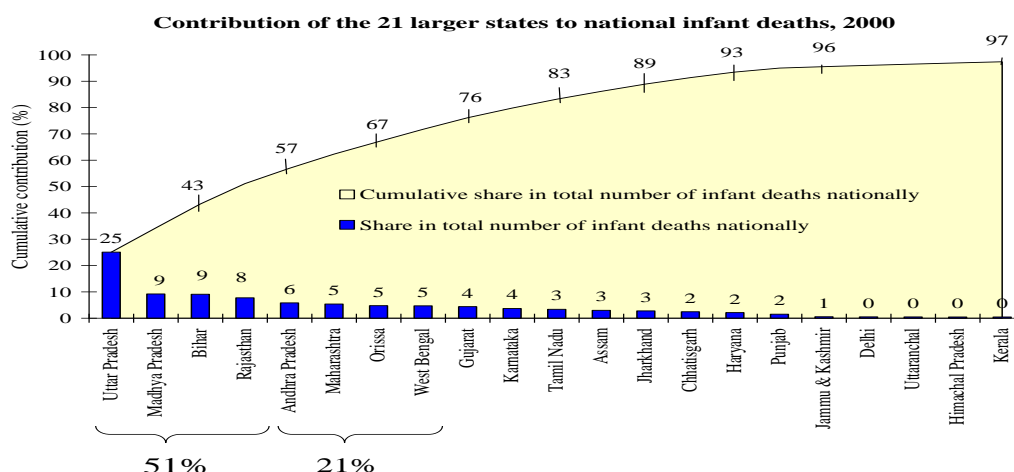
- Infant deaths are even more concentrated at the district and the village levels.

Findings and suggestions:

The second significant breakthrough in thinking is often summarized by the phrase "healthier means wealthier." In other words, health and longevity are very consequential for economic performance. Although macroeconomists and economic policymakers have traditionally viewed population health as a social indicator that improves only after countries become wealthy, new thinking views health itself as an instrument of economic growth, not simply a consequence of it.

Health is believed to drive economic growth for four main reasons. First, a healthier workforce is a more productive workforce. Second, healthier children tend to have better records of school attendance, and stay in school longer, ultimately resulting in a more educated workforce. Healthy children also have better cognitive function, and avoid physical and mental disabilities that may be associated with childhood illness. Third, healthy populations have higher savings rates, as people save more in anticipation of longer lives post-retirement. And finally, healthy populations attract foreign direct investment. In recent years, analyses of the proposition that "healthier means wealthier" have abounded, with the vast majority of them concluding that health is a strong driver of economic growth.

Recent findings suggest that healthier countries experience faster growth in average income, and that a 10-year gain in life expectancy translates into as much as 1 additional percentage point of annual growth of income per capita. This 1 percent is significant in the context of a world economy in which per capita income typically grows at 2-3 percent per year. This potential 1 percentage point gain is also meaningful, as a 10-year gain in life expectancy is well within the reach of many countries. This gain corresponds roughly with the gap between India – where life expectancy is currently about 64 years – and today's developed countries, currently at 78 years. It also corresponds roughly to the magnitude of the increase in life expectancy that many demographers project for developed countries in the next four to seven decades.

Researchers have also focused on the central importance of health in the alleviation of poverty: the main asset poor people possess is their labor, and the value of that asset is crucially determined by their health. This explains why health figures so prominently in plans to halve the global poverty rate, which has emerged as the central imperative of the entire global development community.

III.   Conclusion:

There are inter-state variations (as also intra-state variations) in population growth and in trends in fertility and mortality; some regions are ahead of others in these processes but the general trend is clearly towards falling fertility, mortality, and growth.
•The imbalance in the child sex ratio showing that sex selection persists is a matter of concern.
Indian policymakers will also need to recognize that realization of the demographic dividend depends on an economy's capacity to absorb workers into productive employment. This capacity is strengthened by:
• good governance (effective avenues for citizen input, well-functioning institutions, respect for the rule of law, low level of corruption, respect for property rights, sanctity of contracts);
• Efficient infrastructure (reliable roads, railways, telecommunications, water supply, sanitation, and agricultural needs);
• Prudent fiscal and macroeconomic management (policies that keep inflation reasonable, promote inclusive economic growth, avoid severe trade imbalances);

• well-developed and competitive financial markets (institutions that facilitate mobilization of savings, safeguards to ensure that banks and other financial institutions serve the public interest) and labour markets (a negotiated balance of power between employers and workers); and above all,
• Investments in education and training (strength in all levels of schooling for females and males of all income levels and castes, job training for workers to keep up with new types of services and industries).
While these are all excellent policies independently of demographics, the stakes are much greater when a large cohort is poised to enter the working ages. Given its high levels of internal heterogeneity, India needs to consider a combination of these approaches and policies to catalyse and speed its demographic transition, and to capture a demographic dividend.

For example, some Indian states are in a much better position than others to benefit from demographic change. In some of the poorest states, such as Bihar and Uttar Pradesh, a large portion of the young population is extremely poorly educated and cannot engage productively in the type of work that would provide them a good income and that would help propel India forward economically. For that reason, even as these states experience falling fertility rates and consequently a rising share of working-age people, they are not poised to capture a demographic dividend.

The relative contributions of men's and women's output to economic growth are insufficiently understood. In light of the prospect of increased female participation in the labour force, research might contribute to further understanding of policies that can promote realization of the demographic dividend.

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