

# Population and Standard of Living in States Formed in 2000

*\*A. K. Tiwari*

*\*\* Manish Kumar Srivastava*

## Abstract

In the present paper, an attempt was made to analyze the demographic characteristics of the population and standard of living in three newly formed states, that is, Uttarakhand, Chhattisgarh, and Jharkhand, and a comparison was made with their mother states and India. We also tried to analyze the impact of population growth on standard of living, and we found a significant negative impact of population growth on living standards.

**Keywords:** population, population growth, standard of living index, NFHS, regression analysis

**JEL Classification:** A1, D1, D3, D6

**Paper Submission Date :** June 8, 2014 ; **Paper sent back for Revision :** January 28, 2015 ; **Paper Acceptance Date :** August 31, 2015

Population growth is the increase or decrease in the population of a place in a certain time. The world population growth is around 81 million annually, or 1.2% per year (Trading Economics, n.d.). According to the World Bank, the annual population growth rate of India, in 2011, was 1.28%. Population growth is a combination of natural growth and mechanical growth, and it can be determined by birth, death, immigration rate, and emigration rate.

The economic status of any social group is determined by the amount of wealth and sources of income, social position, and mode of living. This economic measure, to a great extent, determines the standard of living of any group or society. The mode of living in any geographical area depends primarily on the food, clothing, and shelter and an individual's power to get them.

According to Investopedia.com, Standard of Living refers to the level of wealth, comfort, material goods, and necessities available to a certain socioeconomic class in a certain geographic area (Investopedia, n.d.) It is the ease by which people living in a time or place are able to satisfy their needs and/or wants. The standard of living is also closely related to quality of life. Standard of living is generally measured by standards such as real income per person and poverty rate. Access and quality of health care, income growth inequality, and educational standards are also used to measure the standard of living. So, the standard of living can be used as a measure to compare the quality of life in various geographic areas.

Population growth occurs in a country with the most poverty, showing the direct link between high population growth and low standards of living. The nations with high standards of living generally have low rates of population growth. Australia's population growth is 1.8% per annum. It is caused mainly by high mechanical growth. However, Australia remains the only nation in the world with both - high population growth and high standards of living.

---

*\*Faculty Member*, IBS Business School, Dehradun, The ICFAI University, Rajawala Road, Central Hopetown, Selaqui, Dehradun-248 197, Uttarakhand. Email id: abhay\_stat@rediffmail.com

*\*\*Faculty Member*, IBS Business School, Dehradun, The ICFAI University, Rajawala Road, Central Hopetown, Selaqui, Dehradun-248 197, Uttarakhand. Email id: srivastavamanishkumar11@gmail.com

## Literature Review

Brown (1954), in his book *The Challenge of Man's Future* suggested that population should be controlled through birth control by looking at man's situation from the standpoint of a biological population that will be controlled by nature if the species does not act to control itself. He studied the reduction in resources which will occur due to increase in population. McKelvey (1959) analyzed resources, population growth, and level of living, and tried to understand the relation of natural and human resources to population growth and level of living by examining theoretical relations and by analyzing observations.

Nelissen and Vossen (1993) studied the impact of ageing population on standard of living. The aim of this article was to elaborate on the question of whether population ageing will become a serious threat to the standards of living. To answer this question, they used strongly diverging scenarios for the population system. The analyses were done for the Netherlands.

Dawson and Tiffin (1998) examined the existence of a long-run, co-integrating relationship between population and per capita GDP in India for the time period from 1950 - 1993. By using cointegration analysis, they found that economic growth rate and population growth rate did not have a long run relationship in the case of India. Thus, according to the researchers, population growth neither caused per capita income growth nor was caused by it. A corollary is that population growth neither stimulates per capita income growth nor detracts from it. Hansen (2000) examined the relationship between population growth and per capita GDP in 117 countries. The threshold regression analysis revealed that there was a significant negative relationship between population growth and per capita GDP only in the countries with a low level of human development.

Kirchner (2011) reviewed three perspectives on the relationship between population growth and living standards under the headings - Hands, Mouths, and Minds. Economists in the Hands tradition viewed the past and prospective contribution of population growth to long-run growth in real living standards as being either broadly neutral or slightly negative. The Mouths perspective argued that population growth can cause living standards to stagnate or even decline by placing increasing demands on current and future output and resources. The Minds perspective, by contrast, argued that the main contribution population growth makes to living standards is via an increased supply of ideas and innovations. From this perspective, population growth, given appropriate institutions and incentives, not only contributes positively to productivity and rising living standards, but is also the main driver of these improvements in the long-run.

Furuoka and Munir (2011) discussed in their study, a proposition that the quality of population aspect should be included in the debate on the relationship between population expansion and economic development.

## Objectives of the Study

The objectives of the present research paper are as follows:

- (1) To analyze the population growth and standard of living index of three newly formed states, that is, Uttarakhand, Chhattisgarh, and Jharkhand.
- (2) To examine a link, if any, between population growth and standard of living.

## States Formed in 2000

In November, 2000, the Government of India created three new states, Chhattisgarh, Uttaranchal, and Jharkhand. The basis for creating the new states was socio-political and not linguistic.

Uttarakhand, formerly known as Uttaranchal, is a state in the northern part of India. Known for its natural beauty and wealth of the Himalayas, the state was carved out of the Himalayan and adjoining north-western districts of Uttar Pradesh on November 9, 2000. It became the 27th state of the Republic of India. It is surrounded

by the Tibet Autonomous Region on the north, Indian states of Uttar Pradesh to the south, Nepal on the east, Haryana to the west, and Himachal Pradesh to the north-west. The State is divided into two broad regions: Garhwal and Kumaon. It comprises of 13 districts. Uttarakhand is the 18<sup>th</sup> largest state in India in terms of geographical area covering 53,843 square kilometers. According to the Census of India 2001, it had a population of 84.89 lakh people, which rose up to 1.01 crore as per the Census of India 2011.

Since its formation, Uttarakhand has been one of the fastest growing states in terms of economic development. The geographical divide between hills and plains, concentration of education, health, and other infrastructure in the districts of plains are affecting the overall development of the state. The majority of the rural population subsists on agriculture and agriculture-related activities (Mittal, Tripathi, & Sethi, 2008).

Madhya Pradesh was reorganized with the creation of Chhattisgarh, constituting the seven eastern districts of the old state. It is rich in mineral wealth and is an important rice-producer. It is surrounded by the states Madhya Pradesh, Odisha, Jharkhand, and Uttar Pradesh. According to the Census of India 2011, it had a population of 2.6 crores.

Jharkhand is comprised of the 18 districts of southern Bihar and it is the fulfillment of a 50-year struggle for creation of a heavily tribal state. The boundaries of the new state are less extensive than the originally-conceived Jharkhand, embracing tribal hill areas of Madhya Pradesh, Odisha, and West Bengal, in addition to southern Bihar. The new state takes 35% of the population of Bihar - India's second most populous state - but, with its coal mines and steel mills, 65% of the state's revenue. According to the Census of India 2001, it had a population of 2.69 crore people, which increased to 3.30 crore people as per the Census of India 2011.

## **Data and Methodology**

The study is based on the data available through National Family Health Survey (NFHS) 2005-06. We have also used data from the published Census 2001 and 2011 Reports, and other concerned sources. To ascertain the demographic status of the states, we analyzed few selected demographic variables like population decadal growth rate, population density, sex ratio, and so forth.

The National Family Health Survey has collected extensive data at the household level. Wide information about sources of income, household belongings, possessions of various durable household goods, and so forth are sufficient to provide better idea of the socioeconomic status of the households. Using various items, the NFHS has defined a measure called standard of living index (SLI) for each household. The SLI of households is classified in three groups, that is, low, medium, and high groups. The SLI of a household has been computed by giving weights to different items (Weights given in NFHS-2) and adding these weights. The different items are as under: House type, toilet facility, electricity, separate room for cooking, ownership of house, ownership of agricultural land, ownership of irrigated land, ownership of livestock, ownership of durable goods.

To ascertain the economic development of states, we used the wealth index calculated by NFHS-3. Wealth index is based on the 33 assets and housing characteristics. It is estimated by assigning a score for each asset to each household, and the scores were summed for each household. On the basis of the wealth index, NFHS has divided households in five different categories, that is, poorest, poorer, middle, richer, and richest. The relationship between standard of living index and population growth was identified with the help of regression analysis.

## **Analysis and Results**

The demographic characteristics of six states and India are depicted in the Table 1. It is evident from the Table that according to Census 2011, the highest populated state was Uttar Pradesh followed by Bihar and Madhya Pradesh. According to the latest census, the decadal growth rate of all the states and India except that of Chhattisgarh was either the same or it declined as compared to the Census 2001. In spite of the fact that Bihar

**Table 1. Selected Demographic Characteristics for Selected States and India**

States	Population		Decadal Growth Rate (%)		Density of Population		Literacy Rate		Sex Ratio		Child Sex Ratio (0-6)	
	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011
Uttarakhand	8479562	10116752	19.2	19.2	159	189	72.3	79.6	964	963	908	886
Uttar Pradesh	166052859	199,812,341	25.8	20.1	690	829	57.4	67.68	898	912	916	899
Chhattisgarh	20795956	25540196	18.1	22.6	154	189	65.2	71.0	990	991	975	964
Madhya Pradesh	60385118	72,626,809	24.3	20.3	196	236	64.1	69.32	920	931	932	912
Jharkhand	26909428	32966238	23.2	23.3	338	414	54.1	67.6	941	947	965	943
Bihar	82878796	104,099,452	28.4	25.1	881	1106	47.5	61.80	921	918	942	933
India	1027015247	1210193422	21.3	17.6	325	382	65.4	74.0	933	940	927	914

Source: Census 2001 & 2011

registered a decline in the decadal growth rate of population (from 28.4% to 25.1%), it continued to be the state having the highest decadal growth rate as compared to the other states under study. The density of population of all the states as well as India had increased drastically. Again, Bihar held the highest position in the tally followed by Uttar Pradesh and Jharkhand.

The literacy rate of India in the last 10 years has shown a praiseworthy improvement. It increased from 65.4% (according to Census 2001) to 74.0% (according to Census 2011). Uttarakhand (79.6%) positioned itself as the state having the highest literacy rate as compared to the other states under study. The literacy rate in Uttarakhand was more than the all India average of 74%. The literacy rate in all the other states was also above 60%, which is a positive sign.

In India, the declining sex ratio presents many challenges. The all India average increased from 933 to 940, but this is still insufficient. The sex ratio of Uttar Pradesh (912) was the lowest among the other states followed by Bihar (918) and Madhya Pradesh (931). Chhattisgarh (991), Uttarakhand (963), and Jharkhand (941) were the states which had the sex ratio more than the all India average.

## **Comparative Analysis of Demographic Characteristics of New States with their Mother States**

It is evident from the Table 1 that the decadal growth rate of Uttarakhand and Jharkhand remained almost constant according to the Census 2001 and 2011, but Chhattisgarh registered an increase of 24.86% in this rate as compared to the Census 2001. All the mother states registered a downfall in their decadal growth rate ranging from 11% (Bihar) to 22% (Uttar Pradesh). According to the last two censuses, the percentage change in the density of population of Uttarakhand and Jharkhand was less than what it was in their mother states. It was more in case of Chhattisgarh (22.7%) as compared to that of Madhya Pradesh (20.4%).

In percentage terms, the literacy rate of all the new states was more than that of their respective mother states. However, in terms of percentage change from the last census, Uttar Pradesh (17.9%) and Bihar (30.1%) showed greater improvement as compared to the carved out states, that is, Uttarakhand and Jharkhand.

In all the states under study, the child sex ratio showed a declining trend. The child sex-ratio in Uttarakhand (24%) and Jharkhand (23% approx) had declined more than what it was in their mother states, that is, Uttar Pradesh (18%) and Bihar (9.5%). This ratio had declined in Chhattisgarh (11%) also, but it was less than what was in Madhya Pradesh (21%).

NFHS has classified SLI score in three categories, index scores range from 0-14 for a low standard of living, from 15-24 for a medium standard of living, and 25-67 denote a high standard of living. The Table 2 presents the standard of living in states formed in 2000 along with their mother states. The percentage of households which

**Table 2. Standard of Living Index for Selected States and India (% of Households)**

States	Standard of Living Index	Total	Caste				Religion			Residence	
			SC	ST	OBC	Others	Hindu	Muslim	Others	Urban	Rural
Uttarakhand	Low	17.4	29.6	30.7	23.2	11.3	17.9	16.7	9.9	7.5	21.2
	Medium	30.1	36.9	31.9	29.1	28.0	30.5	35.3	16.8	17.3	35.1
	High	52.5	33.5	37.5	47.7	60.7	51.6	48.0	73.3	75.1	23.7
Uttar Pradesh	Low	38.5	55.4	71.9	39.0	18.5	38.8	38.5	6.6	14.5	46.7
	Medium	33.7	29.6	19.3	37.7	30.0	33.7	34.6	10.0	27.3	35.9
	High	27.8	14.8	8.8	23.3	51.5	27.4	26.9	83.0	58.2	17.5
Chhattisgarh	Low	37.0	42.0	51.3	31.0	17.7	37.8	27.9	10.6	15.6	43.0
	Medium	39.9	40.0	38.3	44.4	25.9	40.7	26.2	21.5	26.5	43.6
	High	23.1	18.1	10.4	24.6	56.4	21.5	45.9	67.9	57.9	13.4
Madhya Pradesh	Low	42.8	49.2	64.9	40.6	18.7	54.7	32.3	5.0	16.1	53.3
	Medium	31.1	32.1	30.5	34.9	23.6	31.4	32.5	15.5	26.7	32.8
	High	26.1	18.7	4.7	24.6	57.8	23.8	35.2	79.5	57.2	13.9
Jharkhand	Low	44.2	57.5	57.0	40.2	23.3	41.6	46.9	55.1	13.3	54.8
	Medium	33.2	29.4	34.2	37.7	21.5	33.0	32.3	34.7	24.6	36.2
	High	22.6	13.1	8.8	22.1	55.2	25.3	20.8	10.1	62.2	9.1
Bihar	Low	54.2	83.8	43.5	52.4	34.0	53.3	58.5	35.9	25.1	59.7
	Medium	27.4	12.1	39.1	32.0	28.2	26.7	31.4	0	23.5	28.2
	High	18.4	4.1	17.4	15.6	37.8	20.0	10.1	64.1	51.4	12.2
India	Low	32.3	47.5	53.9	31.5	17.2	32.6	35.5	21.6	12.1	42.1
	Medium	32.0	31.7	32.3	36.1	26.4	32.2	33.5	25.2	25.6	35.0
	High	35.7	20.8	13.7	32.5	56.4	35.2	30.9	53.3	62.2	22.9

Source: National Family Health Survey-3

came under the low category of SLI for India was 32.3 % ; for medium category, the figure was 32.0% ; and for high category, the figure was 35.7 %.

There was a considerable variation in the standard of living index (SLI). It was found that the highest percentage of households (52.5%) with high standards of living were in Uttarakhand. On the other hand, this percentage was found to be the lowest in case of Bihar. Uttarakhand had the lowest percentage of households (17.4%) for the low category of SLI. A considerable difference was found in the standards of living in Uttarakhand & Uttar Pradesh, Chhattisgarh & Madhya Pradesh, and Jharkhand & Bihar.

Households' percentages for low, medium, and high standards of living in Uttarakhand were 17.4%, 30.2%, and 52.5%, respectively. In Uttar Pradesh, 38.5% households had low standards of living, 33.7% had medium standards of living, and only 27.5% of the households came in the bracket of households having high standards of living. In Bihar, the standard of living was low in 55% of the households. The medium standard of living was highest for Chhattisgarh, and the figure was the lowest in case of Bihar.

The distribution of standard of living index by caste, religion, and residence are also given in the Table 2. It may be seen from the Table that in different castes' categories, the distribution of SLI varied widely across states. In Bihar, 83.8% households of scheduled castes (SC) belonged to low SLI, but this proportion was 29.7% in Uttarakhand. The proportion of SC households with low standards of living in Uttar Pradesh, Chhattisgarh, Madhya Pradesh, and India were 55.4%, 42.0%, 49.2%, 57.5%, and 47.5%, respectively. The distribution of SC households with high standards of living in Bihar was the lowest followed by the households in Jharkhand. A

**Table 3(a). Distribution of Low Standard of Living Index Households on the Basis of Caste, Religion, and Residence**

States	Standard of Living Index	Total	Caste				Religion			Residence	
			SC	ST	OBC	Others	Hindu	Muslim	Others	Urban	Rural
Uttarakhand	Low	17.4	29.6	30.7	23.2	11.3	17.9	16.7	9.9	7.5	21.2
Uttar Pradesh	Low	38.5	55.4	71.9	39.0	18.5	38.8	38.5	6.6	14.5	46.7
Chhattisgarh	Low	37.0	42.0	51.3	31.0	17.7	37.8	27.9	10.6	15.6	43.0
Madhya Pradesh	Low	42.8	49.2	64.9	40.6	18.7	54.7	32.3	5.0	16.1	53.3
Jharkhand	Low	44.2	57.5	57.0	40.2	23.3	41.6	46.9	55.1	13.3	54.8
Bihar	Low	54.2	83.8	43.5	52.4	34.0	53.3	58.5	35.9	25.1	59.7
India	Low	32.3	47.5	53.9	31.5	17.2	32.6	35.5	21.6	12.1	42.1
ANOVA			$F = 11.32$				$F = 0.18$			$F = 35.61$	
			$p\text{-value} = 0.000$				$p\text{-value} = 0.680$			$p\text{-value} = 0.000$	

Source: National Family Health Survey-3

**Table 3(b). Distribution of Medium Standard of Living Index Households on the Basis of Caste, Religion, and Residence**

States	Standard of Living Index	Total	Caste				Religion			Residence	
			SC	ST	OBC	Others	Hindu	Muslim	Others	Urban	Rural
Uttarakhand	Medium		36.9	31.9	29.1	28.0	30.5	35.3	16.8	17.3	35.1
Uttar Pradesh	Medium		29.6	19.3	37.7	30.0	33.7	34.6	10.0	27.3	35.9
Chhattisgarh	Medium		40.0	38.3	44.4	25.9	40.7	26.2	21.5	26.5	43.6
Madhya Pradesh	Medium		32.1	30.5	34.9	23.6	31.4	32.5	15.5	26.7	32.8
Jharkhand	Medium		29.4	34.2	37.7	21.5	33.0	32.3	34.7	24.6	36.2
Bihar	Medium		12.1	39.1	32.0	28.2	26.7	31.4	0	23.5	28.2
India	Medium		31.7	32.3	36.1	26.4	32.2	33.5	25.2	25.6	35.0
ANOVA			$F = 3.00$				$F = 3.00$			$F = 24.60$	
			$p\text{-value} = 0.050$				$p\text{-value} = 0.864$			$p\text{-value} = 0.000$	

Source: National Family Health Survey-3

**Table 3(c). Distribution of High Standard of Living Index Households on the Basis of Caste, Religion, and Residence**

States	Standard of Living Index	Total	Caste				Religion			Residence	
			SC	ST	OBC	Others	Hindu	Muslim	Others	Urban	Rural
Uttarakhand	High	52.5	33.5	37.5	47.7	60.7	51.6	48.0	73.3	75.1	23.7
Uttar Pradesh	High	27.8	14.8	8.8	23.3	51.5	27.4	26.9	83.0	58.2	17.5
Chhattisgarh	High	23.1	18.1	10.4	24.6	56.4	21.5	45.9	67.9	57.9	13.4
Madhya Pradesh	High	26.1	18.7	4.7	24.6	57.8	23.8	35.2	79.5	57.2	13.9
Jharkhand	High	22.6	13.1	8.8	22.1	55.2	25.3	20.8	10.1	62.2	9.1
Bihar	High	18.4	4.1	17.4	15.6	37.8	20.0	10.1	64.1	51.4	12.2
India	High	35.7	20.8	13.7	32.5	56.4	35.2	30.9	53.3	62.2	22.9
ANOVA			$F = 24.57$				$F = 0.07$			$F = 164.07$	
			$p\text{-value} = 0.000$				$p\text{-value} = 0.782$			$p\text{-value} = 0.000$	

Source: National Family Health Survey-3

similar pattern may be seen in all six states as well as India for the Scheduled Tribes (ST) households' distribution in the above mentioned three categories of SLI.

According to Table 3(a), Table 3(b), and Table 3(c), the status of standard of living in all the three categories, that is, low, medium, and high in Uttarakhand and Uttar Pradesh was almost the same in both Hindu and Muslim households. The distribution of Hindu households in 'high category' of SLI in Jharkhand, Bihar, and India was 25.3%, 20.0%, and 35.2% ; and for the Muslim community, this distribution was 20.8%, 10.1%, and 30.9%. On the other side, in the same category, living standards of Muslims in Chhattisgarh and Madhya Pradesh were better as compared to that of the Hindu population. The standard of living of people living in rural areas was poorer than that of those living in the urban areas for all six states as well as for the entire country.

The ANOVA results indicate that the  $p$  - values are significant ( $<0.01$ ) for castes and residence, and it is insignificant ( $> 0.01$ ) for religion. Results of ANOVA show there is a difference in standard of living among castes, but it is same for the religions.

The Table 4 presents the population separated into different 'categories of wealth' by states. Twenty one percent (21%) of the population in India was in the richest group of wealth index, and the same amount of population belonged to the poorest category. It was found that the highest - 32.6% of the households in Uttarakhand came in the 'richest' category. This statistic was very low in Uttar Pradesh. In Jharkhand, more than half of the population came in the 'poorest' category.

## Link Between Population Growth and Standard of Living

Studies show that population growth occurs in places with the most poverty. The Table 5 shows the state-wise SLI and population decadal growth rate. Regression analysis was done considering the first 15 most populated states of India. Beta coefficient of decadal population growth is statistically significant. We used the regression analysis for two cases: First, with Odisha and second, without Odisha.

In both the cases, the  $R$  - square and beta coefficient are statistically significant. A markable improvement in  $R$  - square can be seen after excluding Odisha from the regression analysis. This Table shows that there is a negative relationship between standard of living and population growth. It has been found that if there is more population growth, then the standard of living of the population is also low.

When regression analysis between average standard of living index ( $Y$ ) and decadal population growth was conducted by taking 15 major populated states, a significant impact was found on standard of living of population growth. The results of simple regression analysis considering average standard of living index and population growth rate are depicted in the Table 6. The results suggest that population growth negatively affects the standard of living index.

**Table 4. Wealth Index for Selected States and India**

States	Wealth Index				
	Poorest	Poorer	Middle	Richer	Richest
Uttarakhand	7.1	15.8	21.3	23.2	32.6
Uttar Pradesh	27.8	25.0	18.2	15.5	13.4
Chhattisgarh	43.0	28.6	31.1	8.2	9.4
Madhya Pradesh	38.4	23.6	12.7	11.9	13.4
Jharkhand	52.0	15.1	10.1	11.1	11.6
Bihar	31.1	29.6	17.6	13.0	8.7
India	20.6	19.8	19.9	19.6	20.1

Source: National Family Health Survey-3

**Table 5. State-wise Average Standard of Living Index and Population Decadal Growth-Rate**

State	Average SLI	Decadal Population Growth rate
Uttar Pradesh	19.78	20.1
Maharashtra	24.69	16.0
Bihar	16.3	25.1
West Bengal	19.13	13.9
Andhra Pradesh	20.69	11.1
Madhya Pradesh	19.22	20.3
Tamil Nadu	20.76	15.6
Rajasthan	21.61	21.4
Karnataka	21.74	15.7
Gujarat	25.67	19.2
Odisha	17.27	14.0
Kerala	29.64	4.9
Jharkhand	18.47	22.3
Assam	19.9	16.9
Punjab	30.92	13.7

Source: National Family Health Survey-3 and Census 2011 report

**Table 6. Results of Regression Analysis Between Standard of Living Index and Population Growth Rate**

Particulars	R Square		Beta Coefficient	
	Value	p - Value (Significance level)	Value	p - Value (Significance level)
With Orissa	0.31	0.000	-0.56	0.000
Without Orissa	0.41	0.000	-0.64	0.000

## Policy Implications

In a democracy, the test of a policy is its acceptability. Coercive policies do not stand the test of time. The objective of population policy in the named states, therefore, should be to achieve a stable population base sans coercion, that is consistent with the desired growth and progress. This study will help the Government of Chhattisgarh to have a re-look on the population policy of the state. This study has attempted to provide information about the socio - demographic characteristics and standards of living for the above mentioned three states.

Standard of living refers to the level of wealth, comfort, and necessities available to a certain socioeconomic class in a society, and it is also closely related to the quality of life, so the results of this study will provide useful insights to improve the quality of life in the newly formed states. This research provides a roadmap for understanding population growth, standard of living, and link between population growth and standard of living, which would be useful in developing better insights and policies required for the selected states.

## Conclusion

In the present study, an attempt has been made to analyze the demographic status and standard of living in three newly formed states (formed in 2000). The analysis concludes that performance of Uttarakhand was better with

respect to demographic status and standard of living. The results indicate that the decadal growth rate of all the considered states and India, except Chhattisgarh, was either the same or it declined as compared to the Census 2001. The Literacy rate of Uttarakhand was better as compared to that of the other states. The Sex ratio of all the three new states was higher as compared to the national average. However, the child sex ratio of Uttarakhand was lower as compared to that of the other five states as well as the national average. According to the above analysis, Uttarakhand had the least, while Chhattisgarh had the maximum number of households which fell under the low category of standard of living. On the other hand, maximum proportion of Uttarakhand population had high standards of living. As far as the households which fell in the high category of SLI were concerned, Jharkhand had the least, while Uttarakhand had the maximum number of such households.

The ANOVA results show that there is a significance difference in the standard of living among the castes. The study also suggests that there was no significant difference between the standard of living of the Hindus and the Muslims. A significant gap was seen between the SLI of urban and rural population of these states.

To study the link between population growth and standard of living, regression analysis was conducted by considering the first 15 populated states of India. The above analysis reveals that there is a significant negative impact of population growth on standard of living. The study also found that population growth occurred in places with the most poverty.

## Limitations of the Study and Scope for Further Research

The current study is based upon secondary data on population growth and standard of living for the three states formed in 2000 and their mother states. So, the results may not be generalized for the whole of India. The standard of living was measured using some variables, however, other factors are also important, so there is further scope to include other variables to measure the standard of living. This paper highlights the relationship between population growth and standard of living, and it concludes that there is a negative impact of population growth on the standard of living. Further studies are needed to check this relationship with respect to the other states of India.

## References

- Brown, H. (1954). *The challenge of man's future*. New York: Viking.
- Dawson, P., & Tiffin, R. (1998). Is there a long-run relationship between population growth and living standards? *The Journal of Development Studies*, 34 (5), 149-156.
- Furuoka, F., & Munir, Q. (2011). Population growth and standard of living: A threshold regression approach. *Economics Bulletin*, 31 (1), 844 - 859.
- Hansen, B. E. (2000). Sampling splitting and threshold estimation. *Econometrica*, 68 (3), 575-603.
- Hardgrave Jr., R. L. (2000). *India creates three new states*. Retrieved from <http://www.laits.utexas.edu/solvyns-project/IndiacreatesNewStates.html>
- International Institute for Population Sciences (IIPS). (2007). *National family health survey, 2005-06*. Mumbai: IIPS and ORC Macro.
- Investopedia. (n.d.). *Definition of 'Standard Of Living'*. Retrieved from <http://www.investopedia.com/terms/s/standard-of-living.asp>
- Kirchner, S. (2011). *Hands, mouths and minds: Three perspectives on population growth and living standards* (Policy Monograph, Population and Growth Series). Sydney : Centre for Independent Studies.

- McKelvey, V.E. (1959). Resources, population growth and level of living. *Science*, 129, 875-881.
- Mittal, S., Tripathi, G., & Sethi, D. (2008). *Development strategy for the hill districts of Uttarakhand* (Working Paper No. 217). New Delhi : Indian Council for Research on International Economic Relations.
- Nelissen, J. H., & Vossen, A. P. (1993). The impact of population growth on the standard of living: Demo-economic scenarios for the Netherlands. *European Journal of Population/Revue européenne de Démographie*, 9 (2), 169-196.
- Office of the Registrar General of India. (2001). *Census of India*. New Delhi : Government of India.
- Office of the Registrar General of India. (2011). *Census of India*. New Delhi : Government of India.
- Trading Economics. (n.d.). *Population growth (annual %) in India*. Retrieved from <http://www.tradingeconomics.com/india/population-growth-annual-percent-wb-data.html>