

NAME - EVLEEN KAUR.

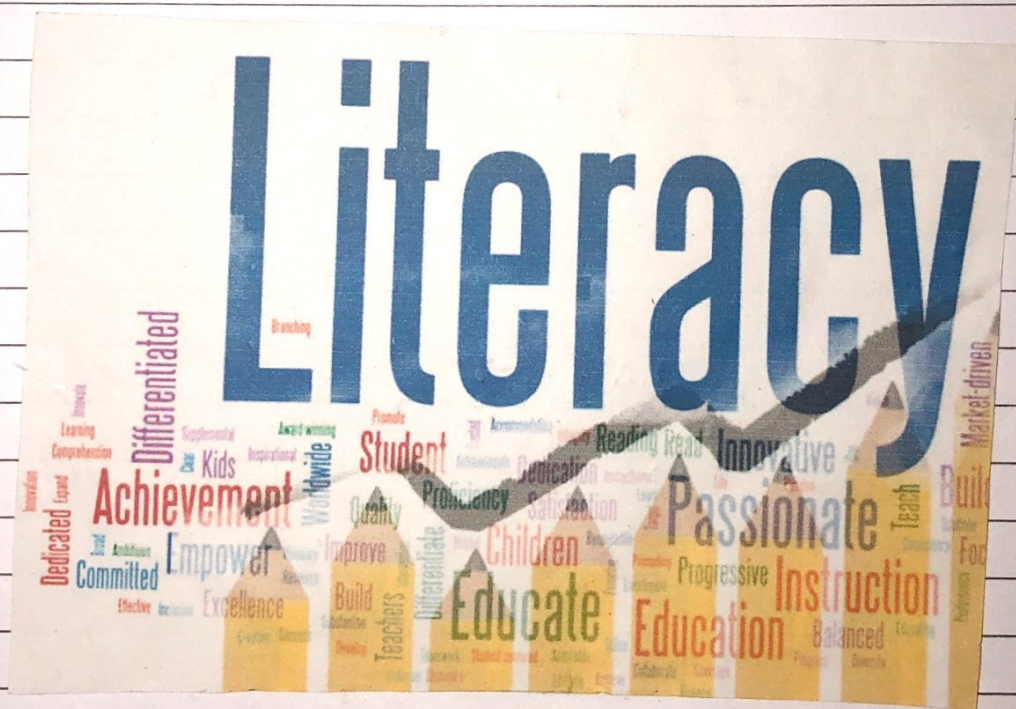
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→ BASIC COMPUTATIONAL

TECHNIQUES FOR

DATA ANALYSIS.

TOPIC: LITERACY RATE IN INDIA..



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LITERACY RATE..

LITERACY RATE TOUCHED
& 71% IN RURAL INDIA
& 86% IN URBAN INDIA

THE MALE LITERACY RATE (7 YEARS AND ABOVE) WAS MARKED AT 83% WHEREAS FEMALE LITERACY RATE STOOD AT 67%

ADULT LITERACY RATE (15 YEARS & ABOVE) IN INDIA WAS AROUND 71%

99% HOUSEHOLDS HAVE ACCESS TO PRIMARY SCHOOLS WITHIN 22 KM

ADULT LITERACY RATE IS 64% IN RURAL INDIA AS COMPARED TO 84% IN URBAN INDIA

SOURCE: NSSO

There is still an alerting margin between the Urban and Rura population considering their birth right to education

ABSTRACT..

India demographic occupy 2nd rank among the world's populated countries. With a population of 1.21 billion and growth rate of 1.41% of the population will only grow more enormous in size.

However when age structure of the India is considered, 65% of India's population is of the age group 15-64 and 30% of population being under the age of 15, it can be inferred that India's population being under the age is very young. When literacy rate of India is considered, it stand at 74.04% as per 2011 census. India's literacy rate at the time of independence was mere 14%. Over the years literacy rate has been increasing but with varied rates in different states with some state like Kerala and Mizoram well above national average and Bihar with a dismal rate of 63.8%. This paper is focus on basic concepts of literates, illiterates, crude literacy rate with their formula. Paper also focus on crude literacy rate in India 1901-2011, literacy rate in India 1951 to 2011, and 1981 to 2011 and literacy rate in different states of India from 1901 to 2011 and steps taken by government in accelerating education planning in India.

INTRODUCTION.

There is a significant relationship between literacy and development. Literacy benefits both individuals and communities. It transforms people, communities and the entire social structure and is a key for socio-economic development. In its earliest uses, the term 'literacy' referred solely to the ability to read and write, one either could or could not. The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines literacy as the ability to identify, understand, interpret, create, communicate, compute and use printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals to develop their knowledge and potential and to participate fully in their community and wider society. Literate societies interact and contribute in development. Literacy level and educational attainment are vital indicators of development in a society. Attainment of universal primary education is one of the Millennium Development Goals of the United Nations to be achieved by the year 2015. Planning Commission of India has also targeted in the eleventh five year plan to increase literacy rate of person of age 7 years or more to 85% and reducing gender gap in literacy to 10% points by 2011-12. Literacy rate and educational development are considered to be key variables.

affecting demographics indicators like fertility, mortality rate and migration. It greatly contribute in improving quality of life, particularly with regard to life expectancy, infant mortality, learning level and nutritional level of children.

Higher level of literacy and educational development lead to greater awareness on the hand and help people in acquiring new skills on the other. This paper focus on basic concept of literates, illiterates, crude literacy rate and effective literacy rate.

• Literates and illiterates

The number of literates and illiterates aged seven and above in India as per the provisional population totals of Census 2011 is 778,454,120 and 272,950,015 respectively. There has been a marked improvement in the proportion of literates in the last decade. Literates in 2011 constitute 74 percent of the total population aged seven and above as compared to 65 percent in 2001. On the other hand, illiterates form 26 percent of the total population in 2011 as compared to 35 percent in 2001. A significant milestone reached in census 2011 is that the total number of illiterates has come down from 304,146,862 in 2001 to 272,950,015 - a decline of 31,196,847 person.

• Literates and illiterates Concepts

Information on literacy is conveyed regarding every individual in the census. For the purpose of census a person aged seven and above, who can both read

and write with understanding in any language, is treated as literate. A person, who can only read but cannot write, they are not literate. In the Census prior to 1991, children below five years of age were necessarily treated as illiterates.

- What is literacy rate

Earlier Census up to 1981, it was customary to work out the literacy rate taking into account the total population. Since literacy rate is more meaningful if the sub-population in the age group of 0-6 is excluded from the total population, it was decided in 1991 to calculate literacy rate for the population seven years and above. The same concept has been retained in all.

REVIEW OF LITERATURE..

- Madhu R. Sekhar (2001):

He viewed that social development depends on good education. Female education has an impact on health and other social issues like sex ratio, birth rate, infant and mortality rate etc. Sex ratio was very low in almost all states where female literacy rates were low. She feels that the windows and doors of education are to be opened widely, so that girls and women get the bright light of knowledge in abundance. A literate mother can do wonders in building up a healthy society and a bright future for our nation. She further highlighted the importance of girls' education and various initiatives to promote literacy especially for the girls by the government found that they were still denied access in education. So, the author feels the need of educating girls should be given priority as women can do wonders in building healthy society and bright future for the nation. In the last the author suggests that the NGOs and the media can come forward to create awareness among the tribal population.

- Sahibala Devi (2003):

Highlighted the Scenario of rural literacy and the wide disparity by gender and across social groups i.e. Schedule Tribes and Schedule Caste in various districts. The author discussed the factors that determinate literacy by dividing into two groups. Firstly the demand side factors like non-agriculture population, social groups and religious composition in district, work participation and development of districts. Secondly, the supply side factors like availability of school facilities i.e. distance, teachers, building book etc. which plays an important part in the progress of literacy. She suggested some measure like adequate care for backward district, availability of school within the habitants and massive scale of government approach to achieved universalisation of literacy.

• Ula Patel (2003):

It observed that female illiteracy was mainly due to social inequality and unequal distribution of power and resources in the society. The author calls for creating suitable relevant environment enable to mobilize, develop and motivate women in their life and make efforts to change the mindset of the society which would provide tools to break the vicious cycle of powerless poverty. In 21st century the challenges for government development planners was how to link women literacy with livelihoods and empowerment.

- K. Madhu Babu and K. Shiva Prasad (2004):

He attempted to study the impact of education on the quality of population and life expectancy of the country. The impressive progress of the literacy rate during 1991-2001 both male and female needs to be sustained. They found out that the female literacy had greater variation on the increase of life expectancy than male literacy and suggested giving more concern to the women.

- Arun C. Mehta (2004):

He analyzed the increase of literacy rate specially the female population during the decade 1991-2001 as initiated with various programmes in 1990's for creating positive environment for education. He further discussed the contribution of formal education to total literates and the National Literacy Mission's influence for enrollment. Though there was decline in the number of illiterates still the number was huge. He feels that the census does not provide the true picture of literacy status as its method of conducting being over estimated and he further compares it with the National Sample Survey organization data (NSSO) for the year 1997. It shows that still a large gap between both the gender and variation among the states.

OBJECTIVE OF THE STUDY..

Considerable regional diversity in terms of social, economic and demographic characteristics prevails in India. This is true not only among the States but among the district of same State. In general, there striking variation in level of education, female work participation, nutritional standards, infant mortality rate, employment, income distribution, political commitment etc among the States in the livelihood of the common people and their interactions. Thus any Country level study is like to hide variations at lower level. As well as several studies reported the relationship between female literacy and socio-economic demographic variations vary from Country to Country, Continent to Continent, develop Countries to developing Countries, and even within a Country or State. Hence it is necessary to study the characteristics at the district level.

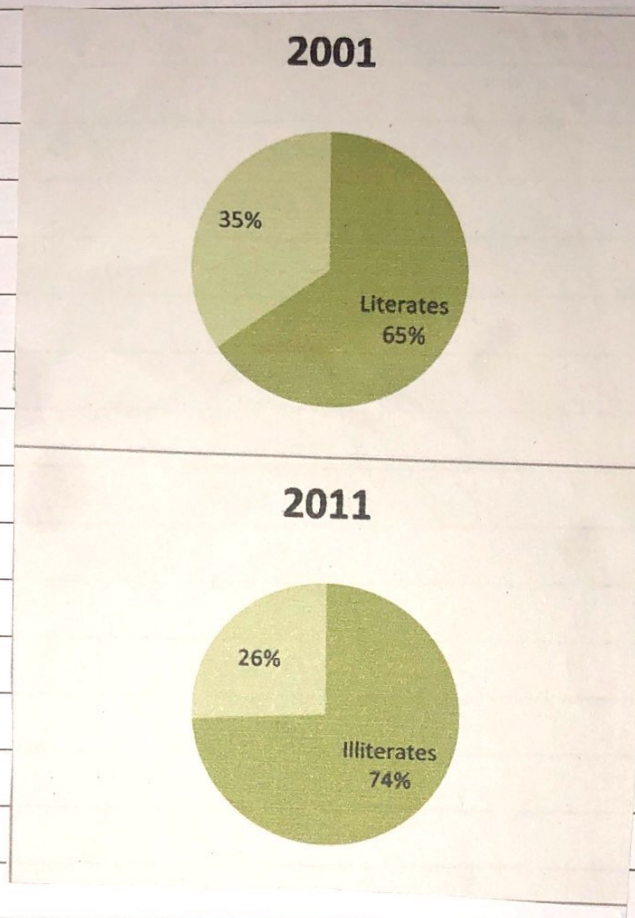
This study involves the analysis of the following aspects in all the district of India. Assessing the level of literacy, among females as well as the extent of gender disparity in literacy in India, all States and its districts using provisional total of Census-2001-2011 data to examine the relationship between male and female literacy rate with Crude literacy rate by sex and main number of births per ever married women at district level of India using Census 2001 data.

⇒ ACCESS TO LITERACY RATE..

1. Number of literates and illiterates among population aged 7 year and above and their change India 2001 and 2011.

Literacy/Illiterates	Persons	Males	Females
1	2	3	4
Population [aged 7 and above]			
2001	86,49,00,041	44,72,14,823	41,76,85,218
2011	1,05,14,04,135	54,07,72,113	51,06,32,022
Increase in 2011 over 2001	18,65,04,094	9,35,57,290	9,29,46,804
Literates			
2001	56,07,53,179	33,65,71,822	22,41,81,357
2011	77,84,54,120	44,42,03,762	33,42,50,358
Increase in 2011 over 2001	21,77,00,941	10,76,31,940	11,00,69,001
Illiterates			
2001	30,41,46,862	11,06,43,001	19,35,03,861
2011	27,29,50,015	9,65,68,351	17,63,81,664
Increase in 2011 over 2001	-3,11,96,847	-1,40,74,650	-1,71,22,197

- Share of Literates and illiterates : Census 2001 and 2011



LITERACY RATE : TRENDS

The effective literacy rate for India in Census 2011, works out to 74.04%. The corresponding figures for males and females are 82.14 and 65.46 percent respectively.

Thus three fourth of the population of aged 7 years and above is literate in the Country. Four out of every five males and two out of every three females in the Country are literate.

The Country has Continued its march in improving literacy rate by recording a jump of 9.21% points during 2001-2011. The increase in literacy rate in males and females are in the order of 6.88% and 11.79%. However efforts are still required to achieve the target 85% set by the Planning Commission to be achieved by the year 2011-12.

An extremely positive development in the present decade is that the gap of 21.59 percentage points recorded between males and females literacy rate in 2001 Census has reduced to 16.68 percentage points in 2011. Though the target set for the year 2011-12 by the Planning Commission of reducing the gap to 10% points has not been achieved, it is heartening that the reduction has been to the order of almost 5% points.

⇒ In below table the effective literacy rates for the Country by persons, males, females and the female gap - 1951.

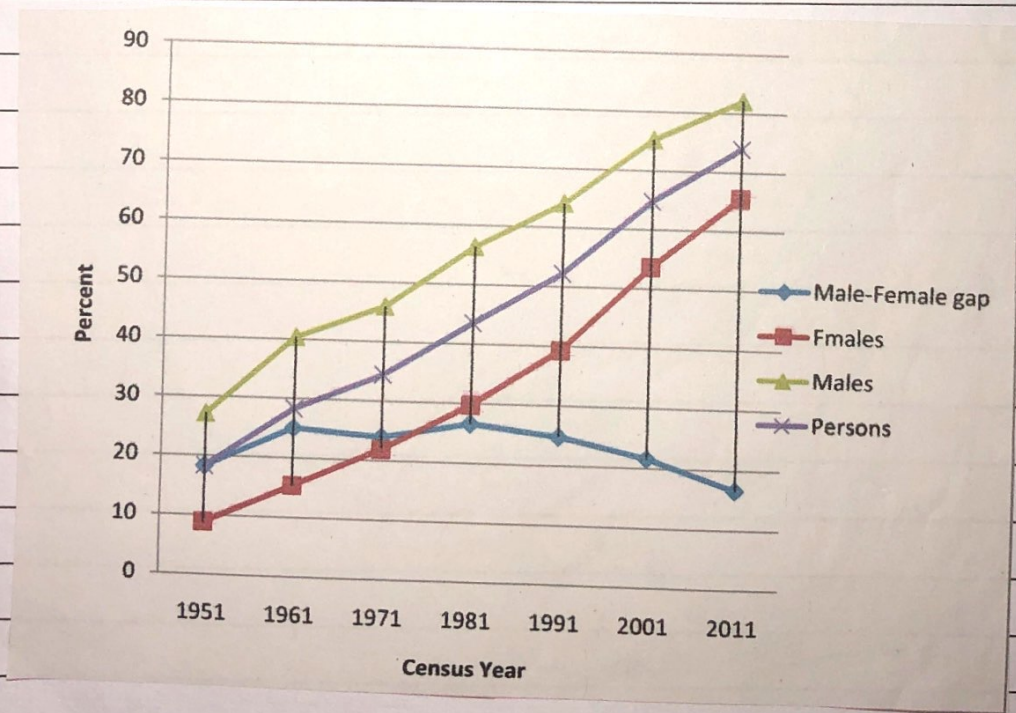
⇒ **LITERACY RATE IN INDIA : 1951-2011**

Literacy rate for 1951, 1961 and 1971 Census relate to population aged 5 years and above. The rates for the 1981, 1991, 2001 and 2011 Census relate to the population aged 7 years and above.

The 1981 literacy rate exclude Assam where the 1981 Census could not be conducted. The 1991 Census literacy rate exclude Jammu & Kashmir.

Census Year	Persons	Males	Females	Male-Female gap in literacy rate
1	2	3	4	5
1951	18.33	27.16	8.86	18.13
1961	28.3	40.4	15.35	25.05
1971	34.45	45.96	21.97	23.98
1981	43.57	56.38	29.76	26.62
1991	52.21	64.13	39.29	24.84
2001	64.83	75.26	53.67	21.59
2011	74.04	82.14	65.47	16.68

Literacy Rate : 1951-2011



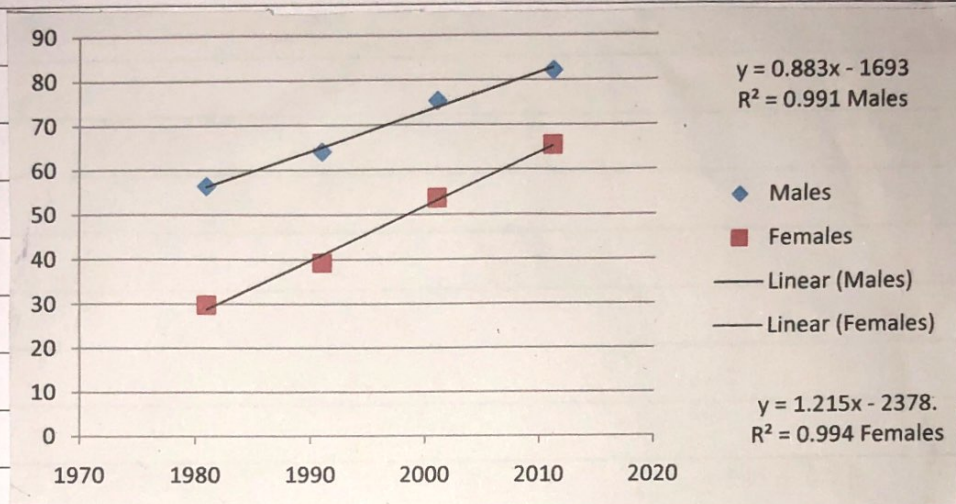
⇒ LITERACY RATE BETWEEN MALE AND FEMALES 1981 - 2011

Literacy rate for 1981, 1991, 2001, 2011 Census relate to the population aged seven years and above. The 1981 literacy rates exclude Assam where census could not be conducted. The 1991 census literacy rates exclude Jammu and Kashmir where census could not be conducted due to disturbed conditions.

	X	Y
Years	Males	Females
1981	56.4	29.8
1991	64.1	39.3
2001	75.3	53.7
2011	82.1	65.5

⇒ Table

• Data Analysis :



With regression and Correlation :-

Using the formula of Correlation in Excel :

$=\text{CORREL}(\text{array1}, \text{array2})$

Here,

array 1 is X (Males)
 array 2 is Y (Females)

Correlation value = 0.997514

SUMMARY OUTPUT

SUMMARY OUTPUT

<i>Regression Statistics</i>	
	0.99655
Multiple R	9767
	0.99313
R Square	1368
Adjusted R Square	0.98626
	2737
Standard Error	1.53791
	7568
Observations	3

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	341.9814762	341.9814762	144.5894037	0.052821857
Residual	1	2.365190445	2.365190445		
Total	2	344.3466667			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	53.38847644	8.878269247	6.013387852	0.104907062	166.1975832	59.4206303	166.1975832	59.4206303
56.4	1.43867011	0.119644568	12.02453341	0.052821857	0.081558271	2.958898491	0.081558271	2.958898491

⇒ CRUDE LITERACY RATE IN INDIA :

1901-2011

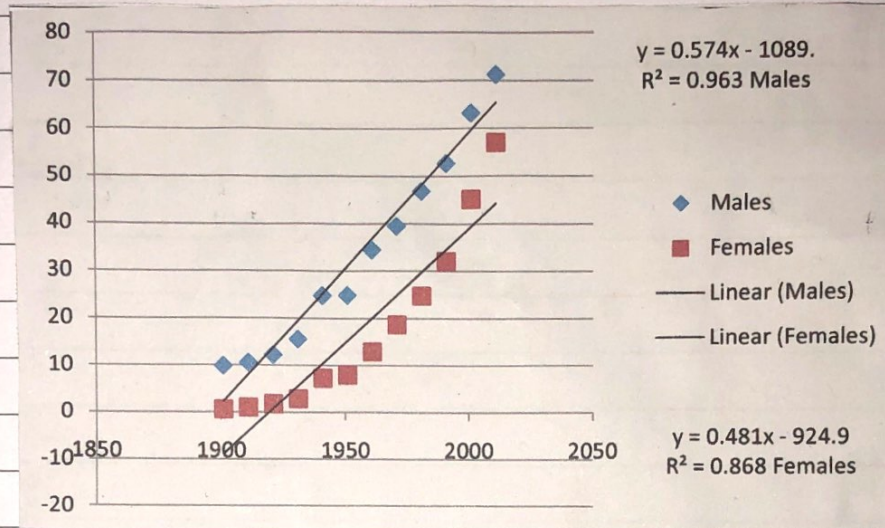
The Crude literacy rate for India by Sex during 1901-2011. The literacy rate designated as Crude literacy rate in this Statement has been computed with total population as base without removing the mandatory illiterate population aged 0.4 or 0.6 yrs, the denominator.

Figure up 1941 are for undivided India. Figures for 1981 excludes Assam as 1981 Census could not conducted in this State due to disturbed condition.

Years	X	Y
	Males	Females
1901	9.83	0.6
1911	10.56	1.05
1921	12.21	1.81
1931	15.59	2.93
1941	24.9	7.3
1951	24.95	7.93
1961	34.44	12.59
1971	39.45	18.69
1981	46.89	24.82
1991	52.74	32.17
2001	63.24	45.15
2011	71.22	56.99

⇒ Table

• Data Analysis :



With regression and Correlation :-

Using the formula of Correlation in Excel :

$$=CORREL(array1, array2)$$

Here,

array1 is X (Males)

array2 is Y (Females)

Correlation value = 0.978078

• SUMMARY OUTPUT :

SUMMARY OUTPUT

<u>Regression Statistics</u>	
Multiple R	0.97854
R Square	0.95755
Adjusted R Square	0.95283
Standard Error	4.06904
Observations	11

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	3361.395	3361.39	203.018	1.76146E-07
Residual	9	149.0138	16.5570		
Total	10	3510.409	691		

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	12.7329	2.556273	4.98105	0.00075	18.5156	6.95025	18.5156	6.95025
	4984	412	9452	834	4204	7644	4204	7644
	0.88718	0.062265	14.2484	1.76146E-07	0.74632	1.02803	0.74632	1.02803
9.83	1525	115	5227		8048	5001	8048	5001

CONCLUSION..

The Census of India 2001, has admittedly thrown up important statistics concerning the population of the country. First and foremost is our population crossing the one billion (or 100 crore) mark an asset in some sense and an area of concern in many other ways.

The pace of population growth saw a slowing down during 1991-2001. Number of persons living in urban areas also rose to 268 million in 2001 Census constituting 27.8% of the population.

On the literacy front, due mainly to the concerted efforts of the government, the male literacy rate in country crossed 75% mark and the female literacy rate the 50% mark. A significant feature is the fall in the absolute number of female illiterates in the country from 200 million in 1991 to 193 in 2001 Census. Among the total number of literates, proportion of those educated up to primary level has been about 55.6% in 2001.

Surprise some to learn that there were at least 2,351 villages in the country in 2001 with population above 100 persons, which do not have even a single female literate. In the economic front and important development as revealed by Census 2001 has been the decline in the growth of workers in agricultural sector between 1991-2001. As India is growing and diversifying its economy, more workers find workers in the non-agricultural sector, helping it

to grow. Spread of education, in different corners of the country is a vehicle used by the people in pursuing vocation in areas other than agriculture. Substantial growth in number of female workers has been another shining example of women's empowerment.

Many such instances are revealed when one sifts through the huge information collected in Census 2001. Census organization on its part is committed to present the results and develop new products allowing users to examine the census data from a closer quarter than ever had been possible using computing technology and the power of the geographic information system. The results and the findings are always for the benefit of our fellow countrymen.

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