

Chapter Five

Decadal Changes in Work Participation



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5.1 Introduction:

Human Geography focuses on the interaction between people and physical space, including how people adjust with changing spatial conditions. Among the many areas of human geography, land and labour are the primary research issues. The study focuses on changing aspects of the working population and their impact on livelihood. Division of labour includes most significantly gender specific wages, number of days, and type of work. Women participation for tribal communities is supportive rather than challenging or leading. Nayak has very aptly described the factors influencing female work participation. These factors are subjected to prevailing customs and practices which exhibit the nature of work given to women, their age and their position in the society. Division of labour, agro-economic condition, puzzling nature of ecology, demand for labour, and household access to productive means are some of the other general factors regarding tribal women work participation (Nayak, 1991: 118).

Myriad laws exist to protect the tribal people and many of the country's mining and forest resources belong to them. Yet these indigenous people are neither eliminated nor completely absorbed in the main focus of development (Maharatna, 2011: 42). The Indian agricultural sector has grown at an average annual growth rate of 4.6 per cent between 2017-18 to 2022-23. India's agricultural export increased by 18 per cent touching an all-time high of US \$50.2 billion during 2020-21 and 2021-22. This achievement could be made possible by promoting farmer-producer organizations, encouraging crop diversification and improving productivity through support provided for mechanization and developing infrastructure. Further, income support to farmers through Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) enabled them to withstand weather shock (Govt. of India, 2023: 243). Agriculture is the backbone of Gujarat's rural economy. For the overall performance of the State's economy, agriculture and allied sectors still play a major role. During the period from 2011-12 to 2021-22, Gross State Domestic Product (GSDP) at constant prices (2011-12), agricultural sector including animal husbandry sector has increased from Rs 98,015 crores to Rs.130,448 crores. The share of crops and livestock sectors for the estimation of Gross State Value Added (GSVA) is 13.9 per cent (Govt. of Gujarat, 2022b: 9). To eliminate

poverty in the tribal areas and remove the developmental gap with the mainstream, the Gujarat government has initiated Van Bandhu Kalyan Yojana (VBKY) also known as The Chief Minister's Ten-Point Program in the year 2007-08. To improve the infrastructure in tribal areas and to bring them at par with others, Chief Minister's Ten-Point Program covers the following sectors:

1. Opportunities for employment
2. Quality education and higher education
3. Accelerated economic development of tribal areas
4. Health for all
5. Housing for all
6. Safe drinking water for all
7. Irrigation facilities
8. All-weather roads
9. Universal availability of electricity
10. Urban development (Govt. of Gujarat, 2023c: 104)

With regard to tribal agriculture and different issues engulfing it, land-use and related problems have already been observed in the previous chapter. To further the understanding on tribal agriculture, different attributes of farm population shall be examined along with some of the indices of VBKY and Backward Region Grant Fund (BRGF) programmes. The BRGF was launched in February, 2007 to allocate funds for the development of the tribes living in the Scheduled Areas based on specific indicators (Baruah, 2012: 9). Indicators of BRGF include the following:

1. Road
2. Agriculture
3. Drinking water
4. Power
5. Education
6. Health
7. Employment
8. Gender

To understand the division of labour, spatio-temporal variables, socio-economic factors as influencing different classified farm workers, cultivators, main workers and marginal workers, investigation of secondary sources of data along with all the BRGF indices like gender, education, health and different amenities have been studied. The main objective for the chapter is to identify issues regarding farm occupation. And the goal is to measure all the probable hindrances which restrict them from coming up with the same level of stable, sustainable livelihood like the general farmers of the country.

5.2 Decadal Population Changes in Chhota Udepur District:

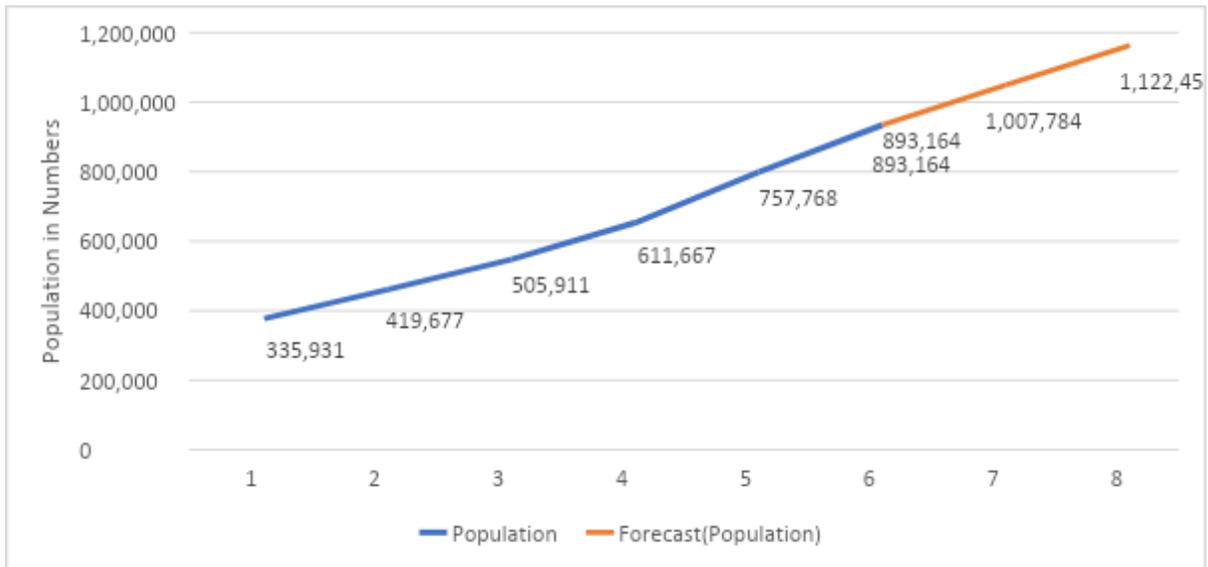
The Chhota Udepur district was part of the Vadodara district till 2013, therefore the population of the new district is estimated based on the new administrative limits. The Table - 5.1 presents the decadal changes in population. With 1.76 per cent of the total geographical area of the State, Chhota Udepur district accommodates 1.77 per cent of its total population. The total population of the District at the 1961 Census (the district was part of Vadodara district then) was 3,35,931, which increased to 8,93,164 (Bodeli *taluka* was not included then) in 2011 Census, which means population of the District grew by nearly 37 per cent. Out of the total population, 4.5 lakh or 50.77 per cent were males, and 4.4 lakh or 49.22 per cent were females. However, there is a uniform growth rate of population in all tribal *talukas* of the District except in Sankheda. In all the tribal *talukas* of Chhota Udepur district, population growth rate ranged between 18 to 23 per cent during the 2001 to 2011 Census period, whereas it was only 7 per cent in Sankheda *taluka*. There is a wide variation in rural-urban population distribution. Relatively higher proportion (more than 93%) of the population are living in rural areas of the District. Only 6.7 per cent of the total population lives in the urban areas. The density of population is higher in the Nasvadi *taluka* with 536 persons per square kilometer. Chhota Udepur, Jetpur Pavi, Kavant and Sankheda *talukas* have more or less similar population density of 289, 293, 287 and 288 persons per square kilometer respectively. The average density of the population in Chhota Udepur (310) matches well with that of the Gujarat state (308) as a whole.

Table - 5.1
Decadal Change in Total Population: Chhota Udepur District
(1961-2031)

Year	Total Population	Population Change (%)
1961	3,35,931	-
1971	4,19,677	24.9
1981	5,05,911	20.5
1991	6,11,667	20.9
2001	7,57,768	23.9
2011	8,93,164	17.9
2021*	10,07,784	12.8
2031*	11,22,451	11.37

* Estimated.

Figure - 5.1
Growth of Population: Chhota Udepur District
(1961-2031)



Note: Total population of the five *talukas* for 2021 and 2031 have been estimated using Linear Regression. The projected population for 2021 and 2031 indicate a declining trend. As Bodeli *taluka* was constituted in 2013, Census data on its population is not available. It is not included in the calculations.

Map - 5.1
Village Level Change in Total Population: Chhota Udepur District
(2001-2011)

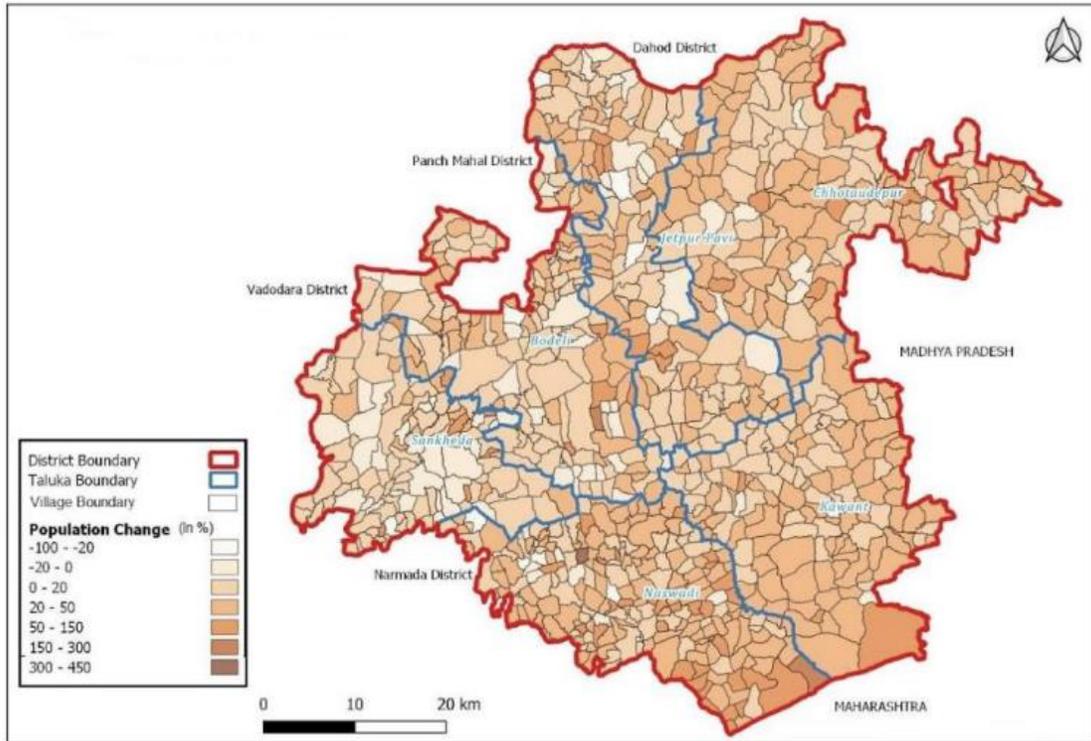
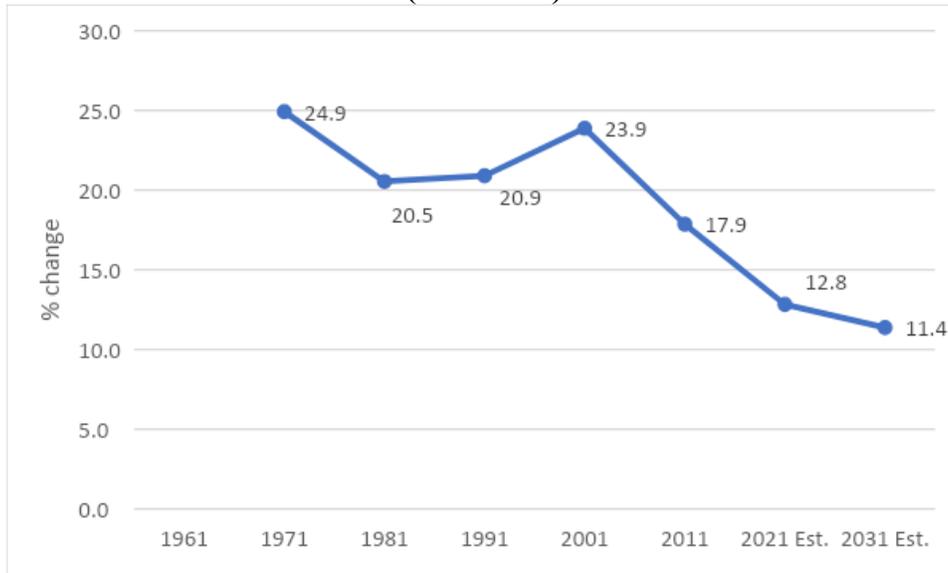


Table - 5.2
Taluka-Wise Number and Decadal Growth in Percentage of Total Population: Chhota Udepur District (1961-2011)

<i>Taluka / District</i>	Population	Number and Growth in Percentage of Persons					
		1961	1971	1981	1991	2001	2011
Chhota Udepur	Total	78,652 (-)	99,440 (26.4)	123,762 (24.5)	150,535 (21.6)	184,776 (22.7)	220,910 (19.6)
	Male	40,685 (-)	51,066 (25.5)	62,919 (23.2)	76,854 (22.1)	93,837 (22.1)	111,855 (19.2)
	Female	37,967 (-)	48,374 (27.4)	60,843 (25.8)	73,681 (21.1)	90,939 (23.4)	109,055 (19.9)
Jetpur Pavi	Total	66,174 (-)	78,484 (18.6)	89,523 (14.1)	106,698 (19.2)	140,268 (31.5)	170,497 (21.6)
	Male	34,157 (-)	40,293 (18.0)	45,619 (13.2)	54,838 (20.2)	71,977 (31.3)	86,610 (20.3)
	Female	32,017 (-)	38,191 (19.3)	43,904 (15.0)	51,860 (18.1)	68,291 (31.7)	83,887 (22.8)
Kavant	Total	62,156 (-)	80,180 (29.0)	99,182 (23.7)	120,355 (21.3)	147,399 (22.5)	174,186 (18.2)
	Male	31,925 (-)	41,130 (28.8)	50,313 (22.3)	61,277 (21.8)	75,042 (22.5)	88,417 (17.8)
	Female	30,231 (-)	39,050 (29.2)	48,869 (25.1)	59,078 (20.9)	72,357 (22.5)	85,769 (18.5)
Nasvadi	Total	75,802 (-)	97,461 (28.6)	116,446 (19.5)	145,234 (24.7)	170,106 (17.1)	203,872 (19.8)
	Male	38,894 (-)	49,995 (28.5)	59,382 (18.8)	74,501 (25.5)	86,766 (16.5)	103,268 (19.0)
	Female	36,908 (-)	47,466 (28.6)	57,064 (20.2)	70,733 (24.0)	83,340 (17.8)	100,604 (20.7)
Sankheda	Total	53,147 (-)	64,112 (20.6)	76,998 (20.1)	88,845 (15.4)	115,219 (29.7)	123,699 (7.4)
	Male	27,337 (-)	33,131 (21.2)	39,585 (19.5)	45,776 (15.6)	59,270 (29.5)	63,379 (6.9)
	Female	25,810 (-)	30,981 (20.0)	37,413 (20.8)	43,069 (15.1)	55,949 (29.9)	60,320 (7.8)
District	Total	335,931 (-)	419,677 (24.9)	505,911 (20.5)	611,667 (20.9)	757,768 (23.9)	893,164 (17.9)
	Male	172,998 (-)	215,615 (24.6)	257,818 (19.6)	313,246 (21.5)	386,892 (23.5)	453,529 (17.2)
	Female	162,933 (-)	204,062 (25.2)	248,093 (21.6)	298,421 (20.3)	370,876 (24.3)	439,635 (18.5)

Source: Census of India, Bodeli *taluka* is not included as it was formed in 2013.

Figure - 5.2
Decadal Change in the Share of Total Population: Chhota Udepur District
(1961-2011)



Growth of population in the Chhota Udepur *taluka* has been around 22.96 per cent every decade. Population increase was highest in 1971 at 26.4 per cent, but slowly began to stagger downwards to 24.5 per cent and 21.6 per cent in 1981 and 1991 respectively. Population again increased in 2001 with 22.7 per cent rise, but fell to 19.6 per cent in 2011. Jetpur Pavi *taluka* witnessed an average population growth rate of about 21 per cent every decade with an unusual increase of 31.5 per cent in 2001. The population increase was lowest in 1981 at 14 per cent. For the last decade of 2001 to 2011, population growth rate on average was 21.6 per cent in Jetpur Pavi *taluka*. In Kavant, the largest increase in population was in 1971 with 29 per cent, much above the mean decadal growth of 22.9 per cent. In Nasvadi, there was a similar rise in population in 1971 with a 28.6 per cent increase. In the last 10 years however, the growth rate of population fell to 18.17 and 19.85 per cent in Kavant and Nasvadi *talukas* respectively.

For Sankheda *taluka*, population growth rate was lowest among the five *talukas* at a decadal average of 18.63 per cent. Perhaps the reduced growth rate of population in Sankheda *taluka* is due to out-migration of the family members of big farmers.

5.3 Decadal Changes in Scheduled Tribe Population:

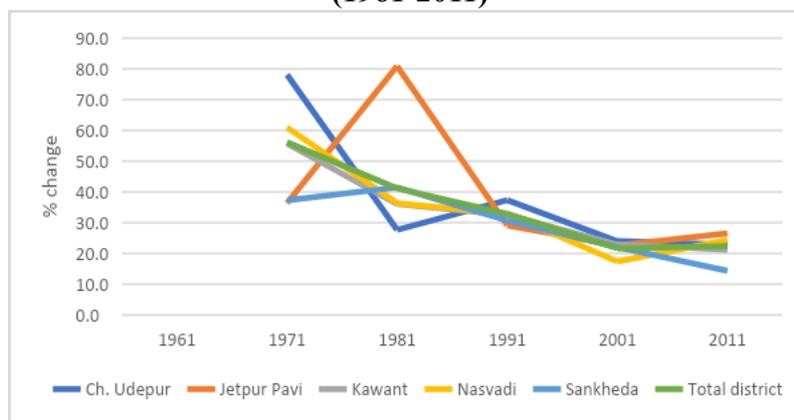
A perusal of Table 5.3 presents a similar scenario for the ST population of the *talukas* of the Chhota Udepur district. When we study the ST population growth rate in Chhota Udepur *taluka*, it has come down to 2.3 per cent during the last decade from 7.5 per cent on an average during the last 50 years.

Table - 5.3
Taluka-Wise Decadal Change in Number and Growth in Percentage of ST Population:
Chhota Udepur District (1961-2011)

<i>Taluka / District</i>	Population	Number and Growth in Percentage of ST population					
		1961	1971	1981	1991	2001	2011
Chhota Udepur	Total	38,422 (-)	68,415 (78.1)	87,325 (27.6)	119,904 (37.3)	148,652 (24.0)	182,537 (22.8)
	Male	19,573 (-)	34,987 (78.8)	44,134 (26.1)	60,962 (38.1)	75,111 (23.2)	92,140 (22.7)
	Female	18,849 (-)	33,428 (77.3)	43,191 (29.2)	58,942 (36.5)	73,541 (24.8)	90,397 (22.9)
Jetpur Pavi	Total	28,037 (-)	38,223 (36.3)	69,138 (80.9)	89,274 (29.1)	109,480 (22.6)	138,518 (26.5)
	Male	14,342 (-)	19,583 (36.5)	35,161 (79.5)	45,669 (29.9)	55,939 (22.5)	70,103 (25.3)
	Female	13,695 (-)	18,640 (36.1)	33,977 (82.3)	43,605 (28.3)	53,541 (22.8)	68,415 (27.8)
Kavant	Total	36,543 (-)	56,922 (55.8)	77,426 (36.0)	102,592 (32.5)	126,064 (22.9)	152,761 (21.2)
	Male	18,641 (-)	28,958 (55.3)	39,097 (35.0)	51,961 (32.9)	64,010 (23.2)	77,370 (20.9)
	Female	17,902 (-)	27,964 (56.2)	38,329 (37.1)	50,631 (32.1)	62,054 (22.6)	75,391 (21.5)
Nasvadi	Total	41,189 (-)	66,298 (61.0)	90,386 (36.3)	120,112 (32.9)	140,981 (17.4)	175,292 (24.3)
	Male	20,874 (-)	34,223 (64.0)	45,946 (34.3)	61,410 (33.7)	71,679 (16.7)	88,530 (23.5)
	Female	20,315 (-)	32,075 (57.9)	44,440 (38.6)	58,702 (32.1)	69,302 (18.1)	86,762 (25.2)
Sankheda	Total	25,119 (-)	34,473 (37.2)	48,762 (41.4)	63,752 (30.7)	77,766 (22.0)	88,904 (14.3)
	Male	12,826 (-)	17,711 (38.1)	25,083 (41.6)	32,811 (30.8)	39,783 (21.2)	45,322 (13.9)
	Female	12,293 (-)	16,762 (36.4)	23,679 (41.3)	30,941 (30.7)	37,983 (22.8)	43,582 (14.7)

Total District	Total	169,310 (-)	264,331 (56.1)	373,037 (41.1)	495,634 (32.9)	602,943 (21.7)	738,012 (22.4)
	Male	86,256 (-)	135,462 (57.0)	189,421 (39.8)	252,813 (33.5)	306,522 (21.2)	373,465 (21.8)
	Female	83,054 (-)	128,869 (55.2)	183,616 (42.5)	242,821 (32.2)	296,421 (22.1)	364,547 (23.0)

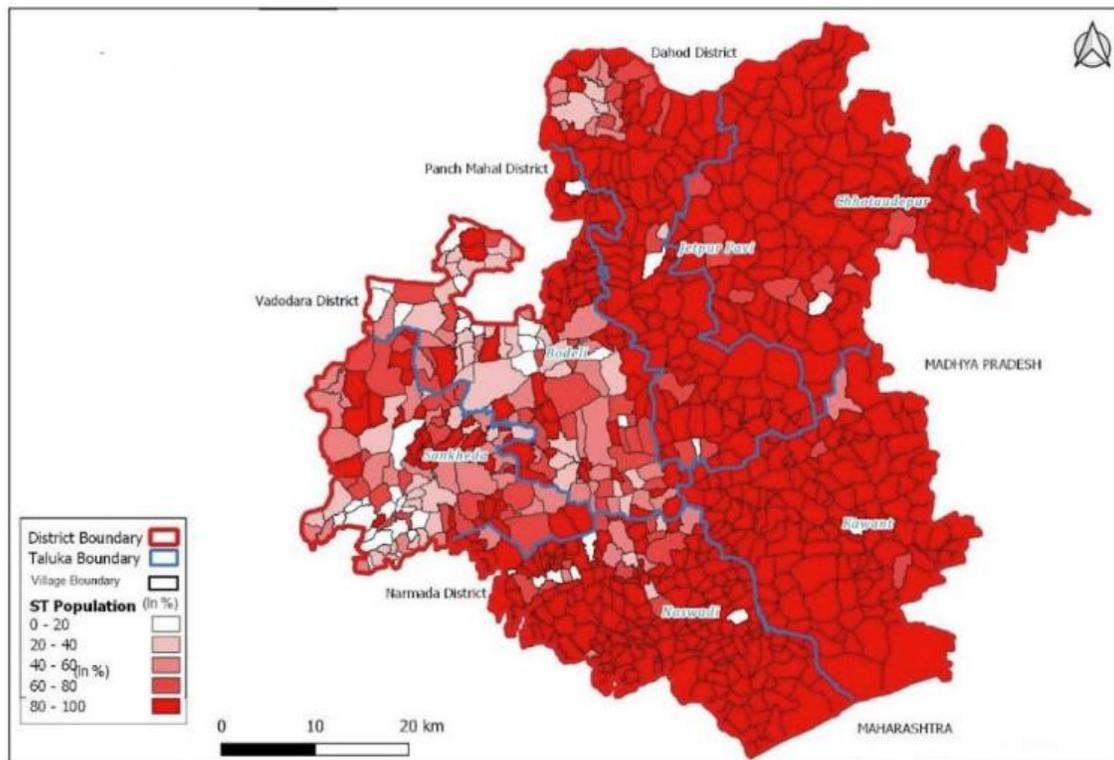
Figure - 5.3
Change in the Growth in Percentage of ST Population: Chhota Udepur District (1961-2011)



*Bodeli *taluka* is not included as this was formed in 2013.

Considering the population growth rate of the ST population over the last 5 decades, Jetpur Pavi, Kavant and Nasvadi *talukas* on an average contributed from 33.7 per cent to 39.1 per cent per decade. For the last 10 years, the decadal growth rate of the ST population in these *talukas* dropped to 26.5 per cent, 21.1 per cent and 24.3 per cent respectively. The *talukas* of Kavant and Nasvadi in 1971, witnessed the highest surge in population with 55.76 per cent and 61 per cent respectively, while Jetpur Pavi had the maximum increase in number of people in 1981, at 81 per cent. For the Sankheda *taluka*, the ST population increased over the last 5 decades on an average of 29.14 per cent. Over the last 10 years, the growth rate has fallen to only 14.3 per cent.

Map - 5.2
Village-Wise Share of ST Population: Chhota Udepur (2011)



Significant observations can be made from Map - 5.2. Chhota Udepur, Jetpur Pavi, Nasvadi and Kavant *talukas* have very high share of the ST population in their total population. Between 80 to 100 per cent of the population in majority of the villages of these *talukas* belong to ST community. Taken together, these *talukas* accommodate more than 80 per cent of the total ST population of the District. On the other hand, predominantly tribal villages in Sankheda and Bodeli *talukas* are not only less, but also their spatial pattern is more dispersed than in other *talukas*. Smaller share of the ST population has been considered as one of the reasons for the scarcity of agricultural labourers in these two *talukas* (Govt. of Gujarat, 2020: 37).

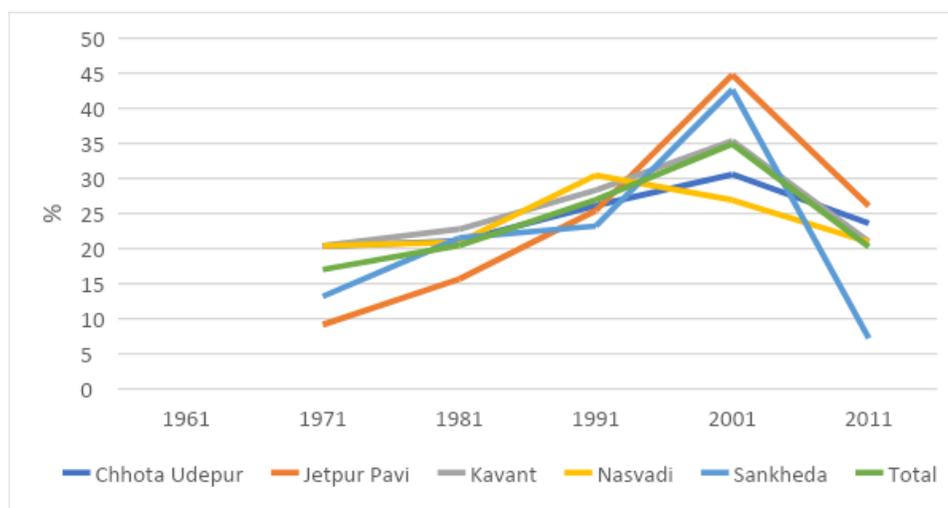
5.4 Decadal Changes in Number of Households in Chhota Udepur District:

With an average of 24.4 per cent decadal growth, the number of households in Chhota Udepur *taluka* has increased almost threefold in the last 50 years. It peaked up in 2001 at 31 per cent, with an increase of 11 per cent compared to 1971. Average family size per household has reduced from 5.9 persons per household in 1961 to 5.6 persons per household in 2011.

Table - 5.4
Taluka-Wise Change in Number of Households and Growth in Percentage:
Chhota Udepur District (1961-2011)

<i>Talukas</i>	Number of Households and Decadal Change in Percentage					
	1961	1971	1981	1991	2001	2011
Chhota Udepur	13,328 (-)	16,038 (20.3)	19,417 (21.1)	24,493 (26.1)	31,987 (30.6)	39,540 (23.6)
Jetpur Pavi	11,045 (-)	12,057 (9.2)	13,946 (15.7)	17,494 (25.4)	25,331 (44.8)	31,943 (26.1)
Kavant	10,256 (-)	12,351 (20.4)	15,164 (22.8)	19,460 (28.3)	26,346 (35.4)	31,888 (21.0)
Nasvadi	13,005 (-)	15,662 (20.4)	18,938 (20.9)	24,706 (30.5)	31,360 (26.9)	37,933 (21.0)
Sankheda	9,460 (-)	10,709 (13.2)	13,016 (21.5)	16,039 (23.2)	22,882 (42.7)	24,540 (7.2)
Total District	57,094 (-)	66,817 (17.0)	80,481 (20.4)	102,192 (27.0)	137,906 (34.9)	165,844 (20.3)

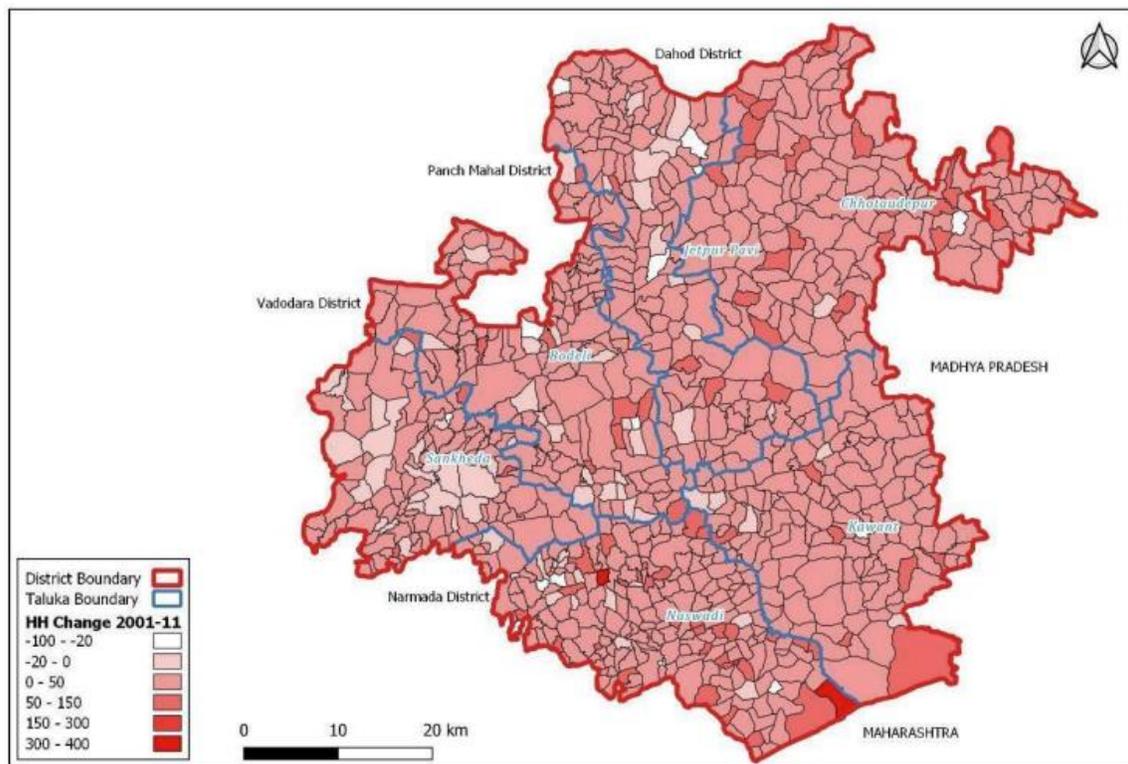
Figure - 5.4
Percentage Change in the Growth of Households: Chhota Udepur District
(1961-2011)



For Jetpur Pavi and Nasvadi talukas, the number of households has grown by 2.9 times with an average growth rate of 24.2 per cent and 23.9 per cent per decade respectively. In Chhota Udepur taluka, the number of households has increased from 20 per cent in 1971 to 23.6 per cent in 2011. In the Kavant taluka, the number of households has increased at an average growth rate

of 25.6 per cent per decade. Percentage share in the number of households has reduced from 35.4 per cent in 2001 to 21 per cent in 2011. In Sankheda *taluka*, the number of households rose by 2.6 times over a period of 50 years and the percentage change of household was almost stagnant from 1971 to 1981. The trend of the reduced number of households for all the *talukas* of Chhota Udepur district could be due to shifting of families to other cities or abroad, which can be an impact of change in socio-economic conditions. The growth rate of the households for the entire District jumped by 2.9 times over the last 50 years at an average growth rate of 21.6 per cent every decade.

Map - 5.3
Village-Wise Change in Number of Households: Chhota Udepur District
(2001 - 2011)



5.5 Decadal Changes in Literacy Rates in Chhota Udepur District:

Strong association of population growth and literacy with agricultural change has long been established (Singh & Dhillon, 1984:126). Less than two-third (56%) of the total population of Chhota Udepur district returned themselves as literate at the 2011 census, and in case of the ST segment of the district population, it was still smaller at 45.9 per cent. While studying the literacy

rates among the ST population of the *talukas* in Chhota Udepur district, it is observed that Chhota Udepur, Jetpur Pavi and Nasvadi *talukas* had an increase in literacy rate by an average of 50 to 54 per cent per decade over the last 50 years. Chhota Udepur and Nasvadi witnessed the highest increase of 59 per cent and 61 per cent respectively in 1981, whereas Jetpur Pavi had an increase of a whopping 98.4 per cent in 2001. Kavant *taluka* recorded 58.1 per cent decadal increase in literacy rate while Sankheda *taluka* showed the lowest average increase (40.7%) in literacy rate over the last 50 years. But, the reducing literacy rates of Jetpur Pavi, Chhota Udepur and Sankheda *talukas* for the 2001-2011 Census period is a matter of serious concern. Literacy rates continued to increase in Kavant and Nasvadi *talukas* during 2001 to 2011. It is evident from the recent scenario that the workers in the agricultural sector are moving to non-farm jobs due to extremely low wages, high stress of physical work, and uncertainty and irregularity of employment. These three hurdles can be addressed by developing knowledge and skill-based agriculture. But for that, awareness about literacy and education among farmers must be increased. *Pradhan Mantri Kaushal Vikas Yojana* (PMKVY) is one of the provisions by the Government towards promoting and imparting skills (Chand, 2022: 20).

In Chhota Udepur district number of primary schools are 1,396 while secondary and higher secondary schools are 76 and 92 respectively. Drop-out rates for primary (Standard I to VIII) students is 1.03 per cent and, 3.55 per cent for secondary (Standard IX & X) students. The District has 7 arts and science colleges, 3 teachers' training colleges and one diploma engineering college. However, it is devoid of any university, Master of Business Administration (MBA) college, Master of Computer Applications (MCA) college, degree engineering college or pharmacy college. Total number of Industrial Training Institute (ITIs) are 8, of which 6 belong to the Government and 2 belong to others (Govt. of Gujarat, 2022: 48).

Table - 5.5
Taluka-Wise Number and Growth in Percentage Literacy: Chhota Udepur District
(1961-2011)

Talukas / District	Number of Literates and Growth in Percentage						
	Year	1961	1971	1981	1991	2001	2011
Chhota Udepur	Total	12,312 (-)	17,667 (43.5)	28,008 (58.5)	39,488 (41.0)	61,491 (55.7)	93,455 (52.0)
	Male	9,084 (-)	12,272 (35.1)	19,432 (58.3)	26,992 (38.9)	39,726 (47.2)	55,652 (40.1)
	Female	3,228 (-)	5,395 (67.1)	8,576 (59.0)	12,496 (45.7)	21,765 (74.2)	37,803 (73.7)
Jetpur Pavi	Total	10,307 (-)	12,111 (17.5)	17,047 (40.8)	27,437 (60.9)	54,448 (98.4)	82,640 (51.8)
	Male	8,064 (-)	9,670 (19.9)	13,650 (41.2)	20,564 (50.7)	36,248 (76.3)	50,142 (38.3)
	Female	2,243 (-)	2,441 (8.8)	3,397 (39.2)	6,873 (102.3)	18,200 (164.8)	32,498 (78.6)
Kavant	Total	7,969 (-)	11,605 (45.6)	19,943 (71.8)	30,056 (50.7)	47,817 (59.1)	77,982 (63.1)
	Male	6,351 (-)	8,944 (40.8)	15,204 (70.0)	21,991 (44.6)	32,854 (49.4)	47,756 (45.4)
	Female	1,618 (-)	2,661 (64.5)	4,739 (78.1)	8,065 (70.2)	14,963 (85.5)	30,226 (102.0)
Nasvadi	Total	11,827 (-)	17,186 (45.3)	27,684 (61.1)	41,072 (48.4)	59,534 (45.0)	92,281 (55.0)
	Male	9,104 (-)	12,943 (42.2)	20,243 (56.4)	28,815 (42.3)	39,762 (38.0)	55,816 (40.4)
	Female	2,723 (-)	4,243 (55.8)	7,441 (75.4)	12,257 (64.7)	19,772 (61.3)	36,465 (84.4)
Sankheda	Total	12,178 (-)	15,250 (25.2)	22,918 (50.3)	30,037 (31.1)	51,319 (70.9)	64,757 (26.2)
	Male	8,839 (-)	11,050 (25.0)	16,246 (47.0)	20,597 (26.8)	32,663 (58.6)	38,394 (17.5)
	Female	3,339 (-)	4,200 (25.8)	6,672 (58.9)	9,440 (41.5)	18,656 (97.6)	26,363 (41.3)
Total District	Total	54,593 (-)	73,819 (35.2)	1,15,600 (56.6)	1,68,090 (45.4)	2,74,609 (63.4)	4,11,115 (49.7)
	Male	41,442 (-)	54,879 (32.4)	84,775 (54.5)	1,18,959 (40.3)	1,81,253 (52.4)	2,47,760 (36.7)
	Female	13,151 (-)	18,940 (44.0)	30,825 (62.8)	49,131 (59.4)	93,356 (90.0)	1,63,355 (75.0)

Figure - 5.5
Decadal Change in Literacy Rate: Chhota Udepur District
(1961-2011)

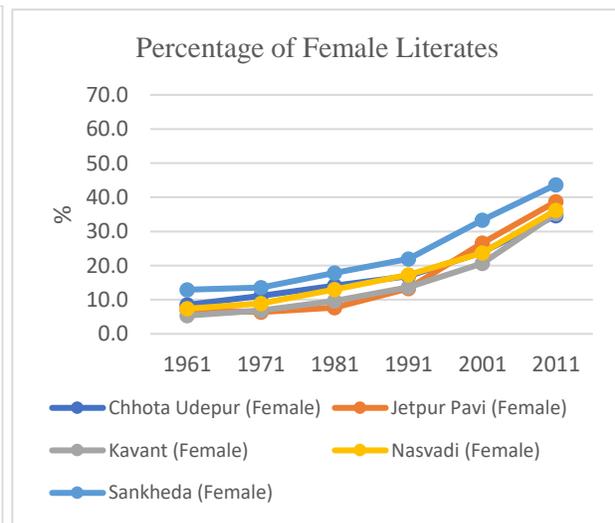
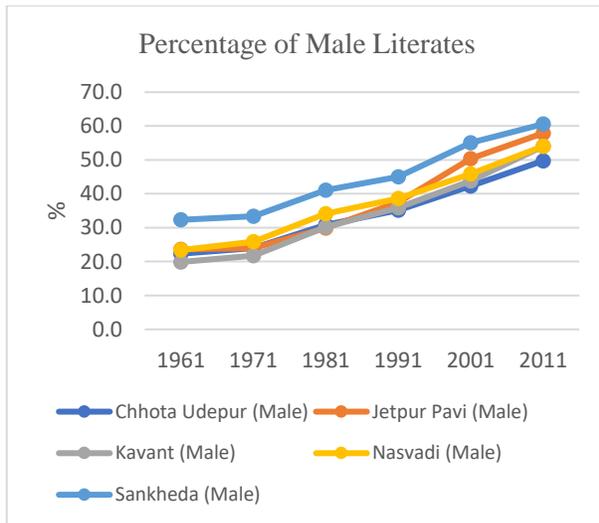
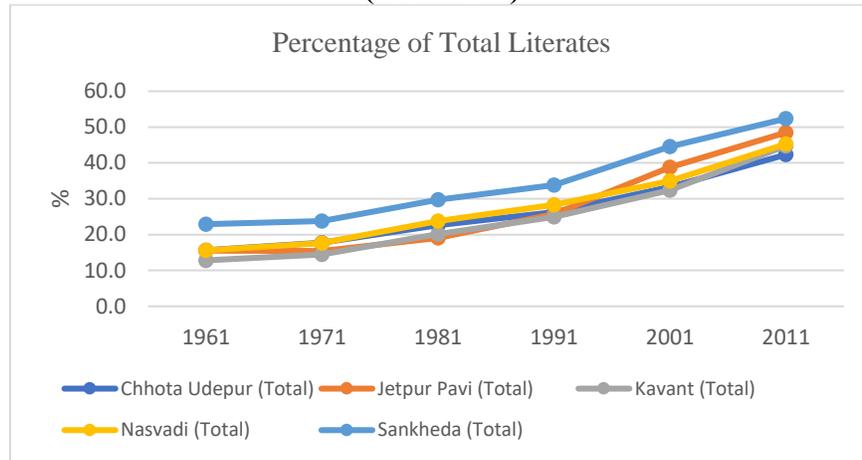


Table - 5.6
Taluka-Wise Decadal Percentage Change in ST Female Literacy: Chhota Udepur District
(1991-2011)

<i>Taluka</i>	1991	2001	2011
Chhota Udepur	2.9 (17.0)	6.9 (23.9)	10.8 (34.7)
Jetpur Pavi	5.6 (13.3)	13.4 (26.7)	12 (38.7)
Kavant	5.7 (13.7)	7.9 (20.7)	10.2 (35.2)
Nasvadi	4.6 (17.3)	7.1 (23.7)	8.2 (36.2)
Sankheda	4.0 (21.9)	10.1 (33.3)	5.5 (43.7)
Total District	4.1 (16.5)	8.7 (25.2)	8.0 (37.2)

Note: Figures in parenthesis indicate actual percentage of female literates

As is clear from Table - 5.6, Sankheda *taluka* has the highest percentage (43.7%) of female literates among all the *talukas* of the District, followed by Jetpur Pavi and Nasvadi *talukas* with

38.7 and 36.2 per cent female literates respectively. Kavant (35.2%) and Chhota Udepur (34.7%) *talukas* have lower percentage of literate females.

5.6 Decadal Change in Sex Ratio in Chhota Udepur District and Status of Women as Workers:

The general perception is, the socio-economic echelon of work participation of women in any region is a major pointer towards progress. Women work for longer hours as they administer dual responsibilities at home as well as at workplace.

Tribal women play a major role in the management of their natural, social, economic resources, and in agricultural operations including crop production, sowing, weeding, livestock rearing and several other spheres of activity. But they remain away from the decision-making processes both at the family and community levels due to traditional values, illiteracy, superstitions, social evils and many other cultural factors. The participatory role of tribals in improving their living conditions by fully exploring natural endowments and alternative uses mostly find an appropriate place in the strategic approach of development (Mohanta, 2017: 749).

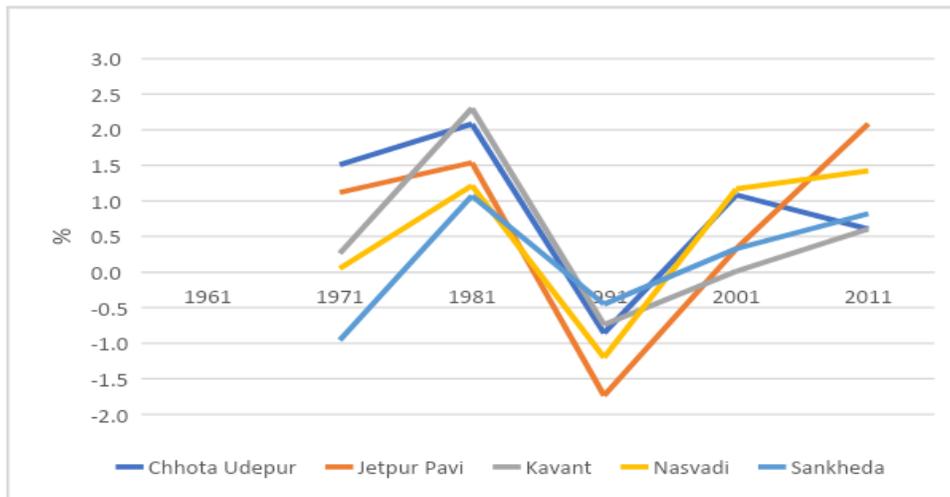
5.6.1 Decadal Change in Sex Ratio:

The sex ratio has improved in Chhota Udepur *taluka* from 933 females per 1000 males in 1961 to 975 females per 1000 males in 2011. Except Sankheda, the other *talukas* like Kavant, Nasvadi and Jetpur Pavi also had male-female ratio of 970 and above during the 2011 Census. Sankheda *taluka* has the lowest of 952 females among 1000 males.

Table - 5.7
Taluka-Wise Decadal Change in Sex Ratio: Chhota Udepur District (1961-2011)

<i>Talukas</i>	Sex Ratio and Decadal Change in Percentage					
	1961	1971	1981	1991	2001	2011
Chhota Udepur	933 (-)	947 (1.5)	967 (2.1)	959 (-0.9)	969 (1.1)	975 (0.6)
Jetpur Pavi	937 (-)	948 (1.1)	962 (1.5)	946 (-1.7)	949 (1.1)	969 (2.1)
Kavant	947 (-)	949 (0.3)	971 (2.3)	964 (-0.7)	964 (0.0)	970 (0.6)
Nasvadi	949 (-)	949 (0.1)	961 (1.2)	949 (-1.2)	961 (1.2)	974 (1.4)
Sankheda	944 (-)	935 (-1.0)	945 (1.1)	941 (0.5)	944 (0.3)	952 (0.8)
Total District	942 (-)	946 (0.49)	962 (1.68)	953 (- 0.99)	959 (0.62)	969 (1.1)

Figure - 5.6
Decadal Change in the Sex Ratio: Chhota Udepur District (1961-2011)



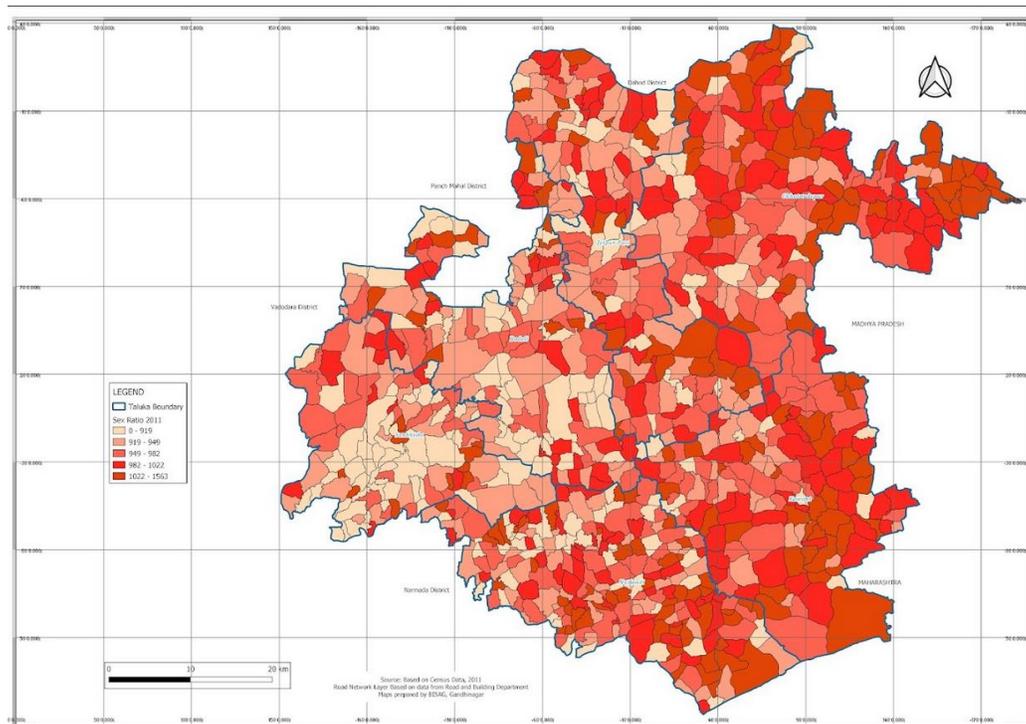
There is indeed a positive increase in male female ratio from 1961 to 2011 for all the five *talukas* of the District. Decadal growth of sex ratio from 1961 to 2011, is the highest for Chhota Udepur *taluka* (0.88 per cent) followed by Jetpur Pavi (0.66 per cent), Nasvadi (0.53 per cent) and Kavant *talukas* (0.5 per cent). Though the sex ratio of the District increased during the last 50 years, the growth rate hardly touched 1 per cent and also decreased by 0.9 per cent in 1991. Sankheda *taluka* witnessed the minimum growth rate of sex ratio with 0.16 per cent with highest increase of only 1.1 per cent in 1981. The sex ratio in the rural areas of Chhota Udepur district is

969, much higher than the State rural average of 949. Mortality rate at birth, poor maternal health, intra-household gender-based treatment and high poverty level perhaps slow down the growth of sex ratio in the Chhota Udepur district. Nevertheless, the sex ratio scenario in the tribal dominated districts is much better compared to other districts of the State like, Ahmadabad, Anand, Gandhinagar, Rajkot and Surendranagar, where the tribes account for a small proportion of the district total population.

Table - 5.8
Comparison of Rural Sex Ratio in ST Dominated and Other Districts of Gujarat (2011)

Other Districts	Percentage of ST Population	Sex Ratio	ST Dominated Districts	Percentage of ST Population	Sex Ratio
Ahmedabad	1.45	932	Chhota Udepur	82.63	969
Anand	0.68	922	Tapi	90.33	1012
Gandhinagar	0.33	937	Dahod	78.64	993
Rajkot	0.53	948	Valsad	73.35	972
Surendranagar	1.53	939	Navsari	62.11	981

Map - 5.4
Village-Wise Sex Ratio: Chhota Udepur District (2011)



5.6.2 Status of Women as Workers:

To increase farm income, land-use decisions are a crucial factor. Land-use decisions for pre-harvest and post-harvest periods include different aspects like crop production, livestock rearing, horticulture, agro and social forestry for fodder, fuel wood and fisheries. These can be divided into three main categories:

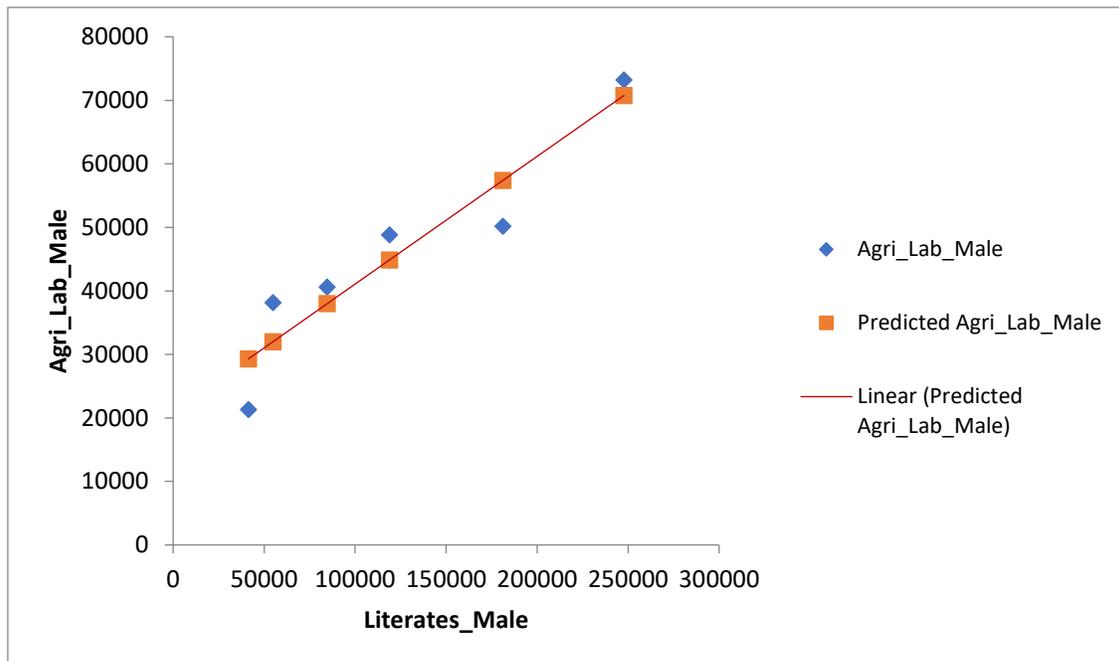
- Organizational decision
- Production decision
- Marketing decision (Goswami et. al., 2010: 98)

There is a need to integrate women in all economically productive activities. Regardless of cultivators or agricultural labourers, an increasing number of women must be included in crucial farm decisions. Education, health and income can empower women to take decisions. Educated females can access health and nutrition, enable themselves for child care, and become agents of change by economic and political participation (Rustagi, 2000: 4279).

Before understanding the female work participation and the nature of their participation, it is necessary to keep two points in mind, access to education and employment. The relationship between educational attainment and employability in the context of women in India, has always displayed a 'U' curve. Across the country, for all ages in both rural and urban areas, women with secondary education had the lowest participation. Female enrolment at all educational levels increased in urban areas between 2010 and 2012, but at the same time for all education levels female enrolment rates dropped in rural areas. Another important deciding factor for female labour force participation is household income. It is observed that, with increase in the income level of the households, female members of the households are less likely to participate in the labour market (Kapsos et. al, 2014: 8)

To observe the correlation between literacy and work opportunities of male and female, regression analysis was carried out for Chhota Udepur district based on 2001 to 2011 Census data.

Figure - 5.7
Regression Analysis between Male Agricultural Labourers and Male Literates



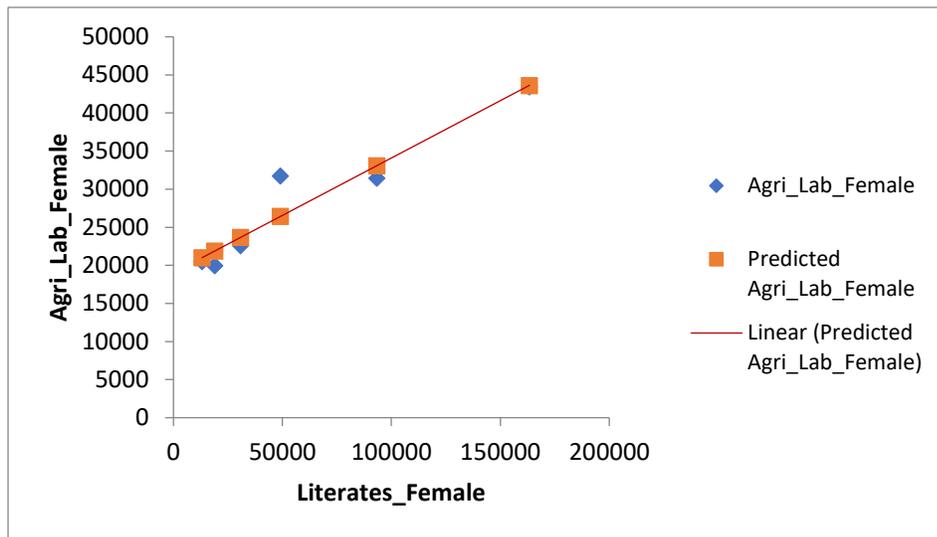
Regression Statistics Summary Output

Multiple R	0.935826324
R square	0.875770909

	P value	Lower 95%	Upper 95%
Change in Male Literate Population	0.006045249	0.095903715	0.306080244

By observing the fit plot and the regression statistics, we deduce that for a significance level of 5 per cent, the p-value is 0.006 which shows an extremely significant relationship between the variables. Also, the 95 per cent class interval does not contain 0, which implies the true value of the predictor variable is not 0. Additionally, the multiple R and R-squared values indicate a direct relation between literacy and the number of male agricultural labourers. So, the model is statistically significant and there is a positive correlation between the two variables. Hence, there is a very strong correlation between male agricultural labourers and male literates. As the number of male literates rises, the number of men working as agricultural labourers also rises.

Figure- 5.8
Regression Analysis between Female Agricultural Labourers and Female Literates



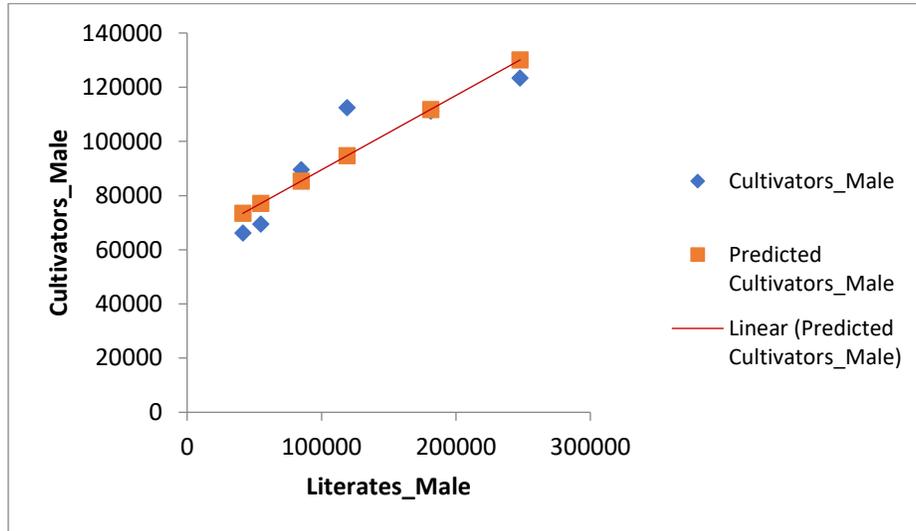
Regression Statistics Summary Output

Multiple R	0.955597759
R square	0.913167077

	P value	Lower 95%	Upper 95%
Change in Female Literate Population	0.002913568	0.086135268	0.215079772

By observing the fit plot and the regression statistics, we can say that approximately 91.3 per cent of the results of the response variable can be predicted by the independent variable. For a significance level of 5 per cent, the p-value is 0.002 which shows an extremely significant relationship between the variables. Also, the 95 per cent class interval does not contain 0, which implies the true value of the predictor variable is not 0. So, the model is statistically significant and there is a positive correlation between the variables. Hence, there is a very strong correlation between female agricultural labourers and female literates. As the number of female literates rises, the number of women working as agricultural labourers also rises.

Figure- 5.9
Regression Analysis between Male Cultivators and Male Literates



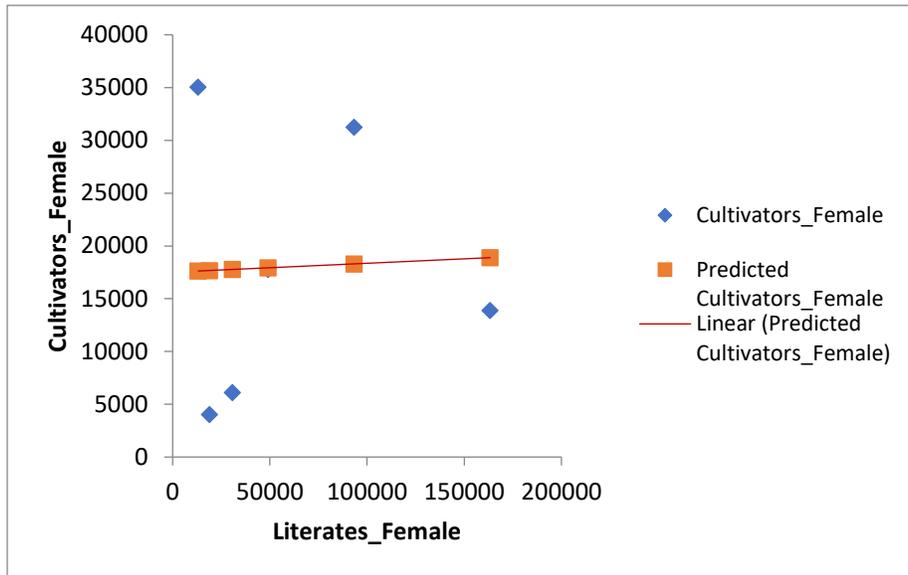
Regression Statistics Summary Output

Multiple R	0.911025507
R square	0.829967474

	P value	Lower 95%	Upper 95%
Change in Male Literate Population	0.011522509	0.102009708	0.446930992

From the regression statistics on male cultivators and male literates, we can say that approximately 83 per cent of the results of the response variable can be predicted by the predictor variable. For a significance level of 5 per cent, the p-value is 0.011 which shows a statistically significant relationship between the two variables. Also, the 95 per cent class interval does not contain 0, which implies the true value of the predictor variable is not 0. So, the model is statistically significant and there is a positive correlation between the two variables. Hence, there is a very strong correlation between male cultivators and male literates. As the number of male literates rises, the number of male cultivators also rises.

Figure - 5.10
Regression Analysis between Female Cultivators and Female Literates



Regression Statistics Summary Output

Multiple R	0.037953836
R square	0.001440494

	P value	Lower 95%	Upper 95%
Change in Female Literate Population	0.943096582	-0.29958448	0.316438621

The above fit plot regression analysis of female literates and female cultivators describe that the multiple R and R-squared values are too low to signify any considerable result. The p-value is too high compared to the threshold of 5 per cent significance level. This provides more evidence for chance being a factor in predicting the results than a direct relation. Hence, there is no strong relation between female cultivators and female literates. As the number of female literates rises, the number of females working as cultivators do not rise.

In the case of agricultural labourers, literacy is a strong predictor for both men as well as women work participation. The significance value in the regression statistics for both the cases is well below the threshold of 5 per cent, which highlights literacy as a strong factor for predicting the number of agricultural labourers. However, the results vary in the case of cultivators. While the line fit plot indicates a steady relation between literate men and male cultivators, the same

cannot be said for female cultivators. In fact, it is interesting to note that with an increase in literacy among women, they are less likely to work as cultivators. Many factors may account as a reason for such variance, but it implies that literate women are more likely to work as agricultural labourers than cultivators. There is also an issue of measurement as described in the recent Economic Survey.

- Use of overly broad categories clubbing productive work as collection of firewood, and poultry farming, etcetera along with regular domestic chores.
- Most of the survey designs are based on a single question for measuring the labour force status of an individual.
- And the prime important measurement issue lies with the narrow approach of limiting productive work to labour force participation. It does not include the value of women's unpaid domestic work such as collecting firewood, child care etcetera (Govt. of India, 2023: 160, 161).

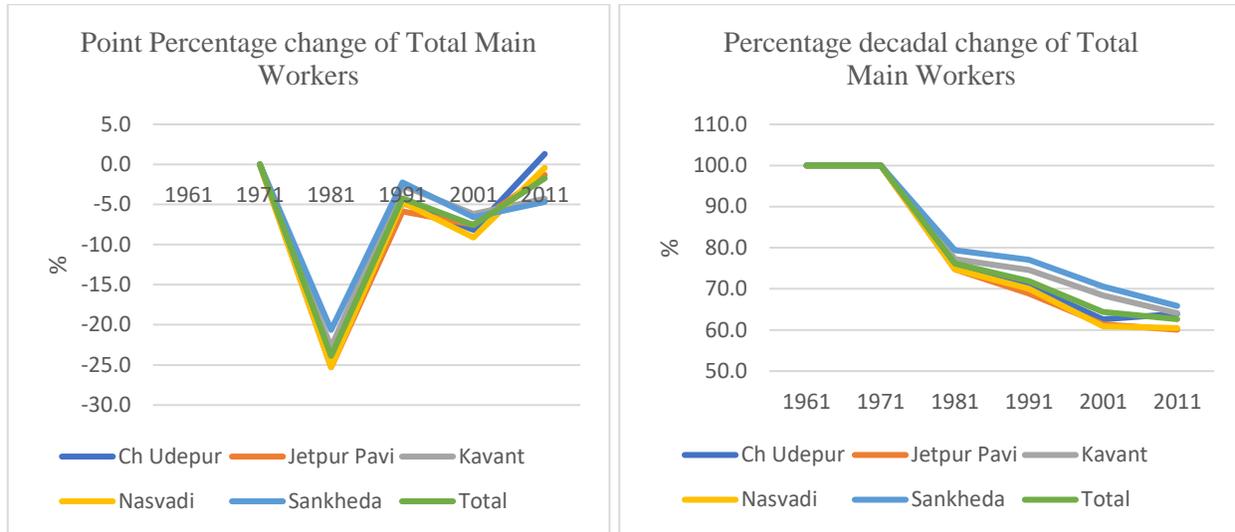
5.7 Decadal Changes in Main Workers in Chhota Udepur District:

Now let us discuss the trend of work participation in the tribal *talukas* of Chhota Udepur district.

Table - 5.9
Taluka-Wise Decadal Change in Total Main Workers Total: Chhota Udepur District (1961-2011)

Taluka/ District	Number /Percentage /Change	Number, Percentage and Point Percentage Change of Total Main Workers					
		1961	1971	1981	1991	2001	2011
Chhota Udepur	Workers	36739	33500	40394	53812	57470	68929
	Percentage	100.0	100.0	75.5	70.8	62.6	63.9
	Change	-	0.0	-24.5	-4.8	-8.2	1.3
Jetpur Pavi	Workers	31,940	28,210	31,888	40,529	47,369	53,880
	Percentage	100.0	100.0	74.7	68.9	61.3	60.1
	Change	-	0.0	-25.3	-5.8	-7.5	-1.3
Kavant	Workers	29,895	27,129	35,618	46,760	56,549	58,177
	Percentage	100.0	100.0	77.2	74.6	68.4	64.1
	Change	-	0.0	-22.8	-2.6	-6.2	-4.3
Nasvadi	Workers	34,803	33,930	39,928	55,109	57,764	66,235
	Percentage	100.0	100.0	74.7	70.0	60.9	60.5
	Change	-	0.0	-25.3	-4.7	-9.1	-0.4
Sankheda	Workers	24,831	22,669	28,165	36,604	44,149	40,847
	Percentage	100.0	100.0	79.4	77.1	70.5	65.8
	Change	-	0.0	-20.6	-2.3	-6.6	-4.7
District	Workers	1,58,208	1,45,438	1,75,993	2,32,814	2,63,301	2,88,068
	Percentage	100.0	100.0	76.1	71.9	64.3	62.6
	Change		0.0	-23.9	-4.2	-7.6	-1.7

Figure - 5.11
Decadal Change in the Total Main Workers: Chhota Udepur District
(1961-2011)



Classification of total workers into main and marginal workers was introduced for the first time during the 1981 Census. At the earlier two census (1961 and 1971) enumerations, the population was considered under worker and non-worker categories. Hence, at these two census years, the worker percentage touches the 100 per cent mark (Fig. - 5.10). The proportion of main workers has reduced to 63.9 per cent in 2011. It is almost 11.6 per cent reduction in the share of main workers to total workers within a 30 years span. Less opportunities as the main worker's job eventually could reduce the income of tribal farmers and increase the dependence on out migration. Though since the last 50 years agriculture remains the predominant sector in terms of worker absorption compared to other two sectors (secondary and tertiary sectors), the share of primary sector in total employment has gone down slowly for the entire State. The development scenario is spatial as well as sectoral. In the case of the tribal districts of Gujarat, the tribal population has experienced little growth in terms of per capita income or employment matching with the other growing workforce (Mehta, 2006: 1; Bagchi. et. al., 2005: 3039). Jetpur Pavi *taluka* also shows a reducing trend in the percentage of main workers in total workers from 74.7 per cent in 1981 to 60.1 per cent in 2011. Similar reducing trends are also observed in Kavant (77.2% to 64.1%), Nasvadi (74.7% to 60.5%), and Sankheda (79.4% to 65.8%) *talukas*.

In all the *talukas* of Chhota Udepur district, between 13 to 15 per cent fall in number of main workers to total workers has taken place. Main workers are assumed to attend the work place throughout the year. But, due to rain fed farming in the District for around 120 days, tribal farmers perhaps do not have engagement for themselves for the whole year. Moreover, due to increase in population and dearth of permanent jobs they prefer to work as migrant wage earners.

Table - 5.10
Taluka-Wise Decadal Change in Male Main Workers: Chhota Udepur District
(1961-2011)

<i>Taluka/</i> <i>District</i>	Number	Number, Percentage and Point Percentage Change of Male Main Workers					
	/Percentage	1961	1971	1981	1991	2001	2011
	/ Change						
Chhota Udepur	Workers	23,038	27,720	34,714	42,155	43,781	52,091
	Percentage	100.0	100.0	98.5	98.9	85.1	83.7
	Change	-	0.0	-1.5	0.4	-13.7	-1.4
Jetpur Pavi	Workers	19,967	23,081	26,564	31,544	36,086	42,899
	Percentage	100.0	100.0	99.5	98.7	86.5	84.7
	Change	-	0.0	-0.5	-0.8	-12.2	-1.8
Kavant	Workers	18,449	22,803	28,192	35,157	38,072	44,646
	Percentage	100.0	100.0	98.5	98.9	86.4	85.1
	Change	-	0.0	-1.5	0.5	-12.5	-1.3
Nasvadi	Workers	22,439	27,856	33,507	44,151	43,572	51,498
	Percentage	100.0	100.0	98.6	99.1	85.8	83.6
	Change	-	0.0	-1.4	0.6	-13.4	-2.2
Sankheda	Workers	15,871	18,650	22,680	27,155	31,431	32,966
	Percentage	100.0	100.0	98.5	99.5	89.3	86.9
	Change	-	0.0	-1.5	1.0	-10.1	-2.4
District	Workers	99,764	1,20,110	1,45,657	1,80,162	1,92,942	2,24,100
	Percentage	100.0	100.0	98.7	99.0	86.5	84.6
	Change	-	0.0	-1.3	0.3	-12.6	-1.8

In Chhota Udepur district, there is a reduction in the proportion of male main workers. From the temporal analysis of 1981 to 2011 data, it becomes clear that in Chhota Udepur and Jetpur Pavi *talukas* the male main worker's percentage has reduced from 98.5 to 83.7 per cent and 99.5 to 84.7 per cent respectively - a fall of about 15 per cent in each *taluka*.

Likewise, nearly 13 to 15 per cent reduction in the proportion of male main workers is noticed in Kavant and Nasvadi *talukas*. The decrease in the share of male main workers has been the maximum, ranging between 10 to 14 per cent, across all *talukas* between 1991 to 2001. Overall, the male main worker percentage for all the *talukas* has reduced between 10 to 13 per cent over the last 30 years. Sankheda *taluka* has registered the lowest reduction in the share of male main workers with 11.6 per cent decrease over the last 30 years. During the slack decade of 1991-2001 too, the Sankheda *taluka* has lost the minimum (-10.1%) percentage of male main workers.

Figure - 5.12
Decadal Change in the Male Main Workers: Chhota Udepur District (1961-2011)

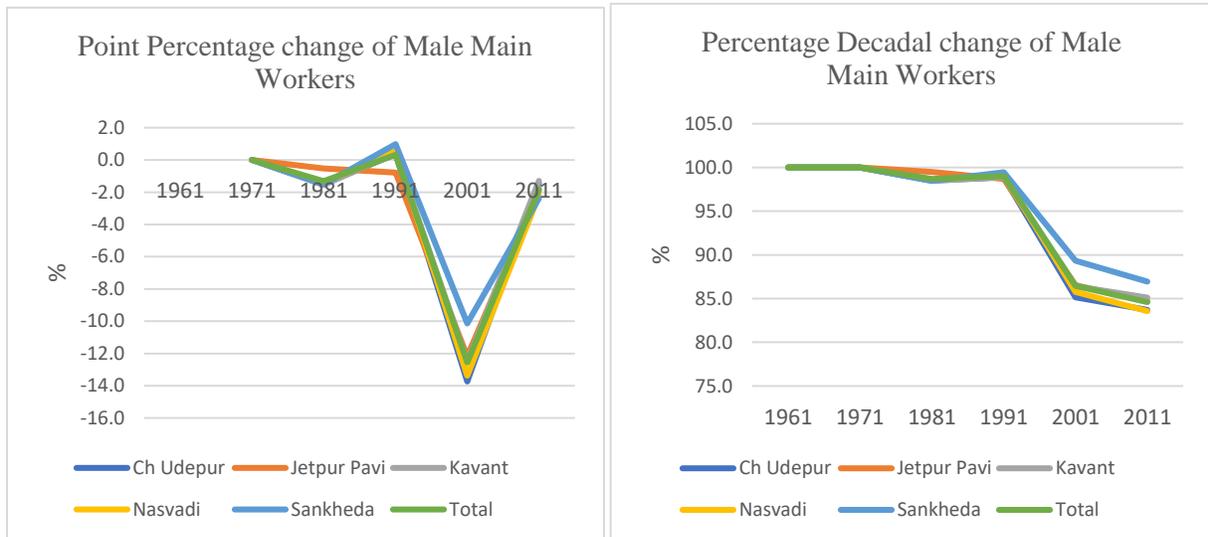
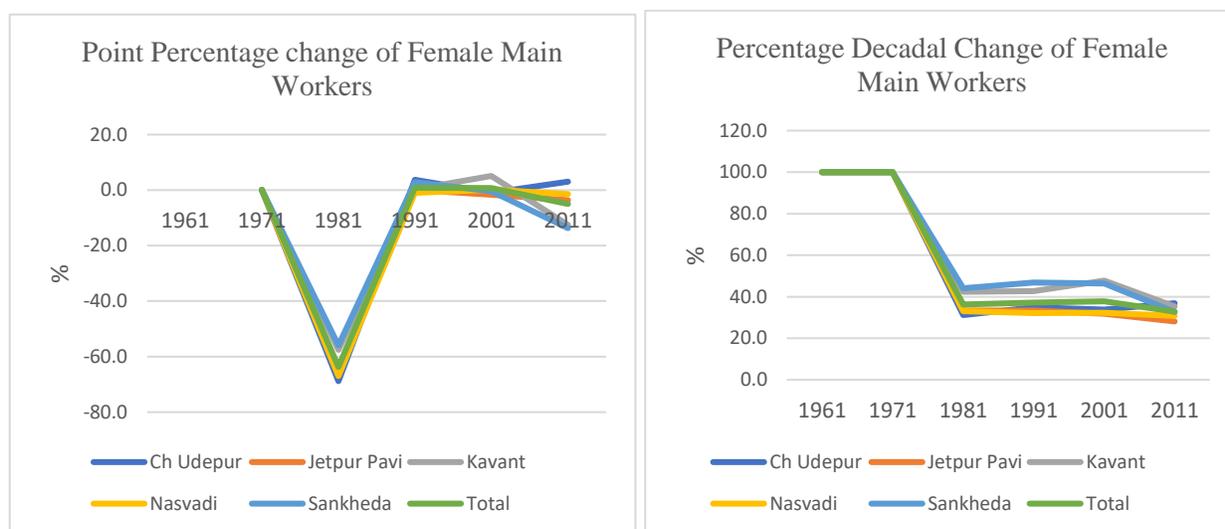


Table - 5.11
Taluka-Wise Decadal Change in Female Main Workers: Chhota Udepur District (1961-2011)

Taluka/ District	Number	Number, Percentage and Point Percentage Change of Female Main Workers					
	/Percentage	1961	1971	1981	1991	2001	2011
Chhota Udepur	Workers	13,701	5,780	5,680	11,657	13,689	16,838
	Percentage	100.0	100.0	31.2	34.9	33.9	36.9
	Change	-	0.0	-68.8	3.7	-1.0	3.0
Jetpur Pavi	Workers	11,973	5,129	5,324	8,985	11,283	10,981
	Percentage	100.0	100.0	33.3	33.4	31.8	28.1
	Change	-	0.0	-66.7	0.1	-1.6	-3.7

Kavant	Workers	11,446	4,326	7,426	11,603	18,477	13,531
	Percentage	100.0	100.0	42.4	42.7	47.8	35.3
	Change	-	0.0	-57.6	0.3	5.1	-12.5
Nasvadi	Workers	12,364	6,074	6,421	10,958	14,192	14,737
	Percentage	100.0	100.0	33.0	32.1	32.2	30.8
	Change	-	0.0	-67.0	-1.0	0.1	-1.5
Sankheda	Workers	8,960	4,019	5,485	9,449	12,718	7,881
	Percentage	100.0	100.0	44.0	46.8	46.4	32.7
	Change	-	0.0	-56.0	2.8	-0.4	-13.7
District	Workers	58,444	25,328	30,336	52,652	70,359	63,968
	Percentage	100.0	100.0	36.3	37.1	37.8	32.8
	Change	-	0.0	-63.7	0.8	0.7	-5.0

Figure - 5.13
Decadal Change in the Female Main Workers: Chhota Udepur District
(1961-2011)



Unlike the male workers, the number of female workers drastically reduced at the 1971 census. While the number of male workers has been increasing since 1961, the number of female workers has reduced drastically in 1971. The District as a whole had 58,444 female workers in 1961, which came down to 25,328 by 1971. All the *talukas* of the District have recorded a similar decrease in the number of female workers during the 1961-1971 decade. It might possibly be due to less job opportunities after the *Kharif* crop is harvested, when the male members migrate out to work in the urban unorganized sectors leaving behind the female members to look after maize

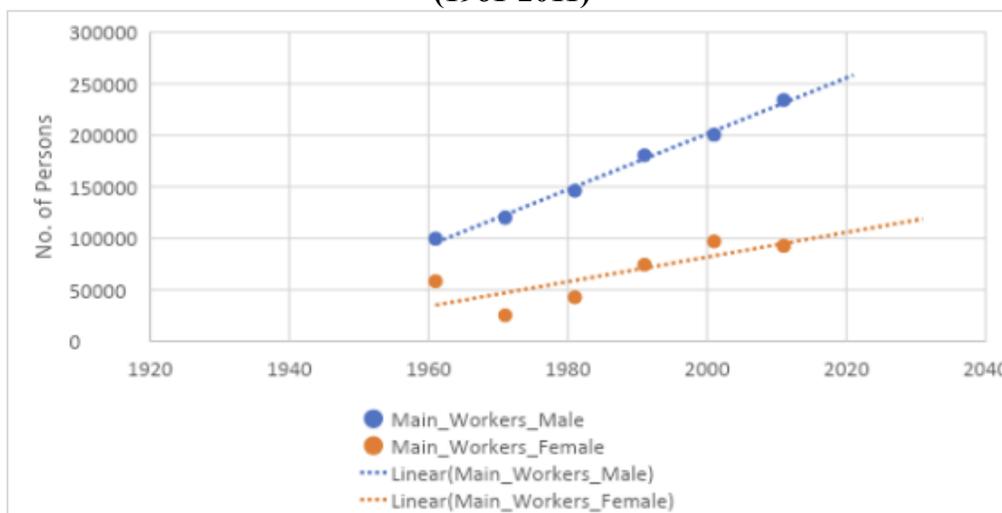
cultivation and domestic duties. Exception is the Chhota Udepur *taluka* where the percentage share of female main workers has increased from 31.2 per cent in 1981 to 36.9 per cent in 2011.

Table - 5.12 clearly shows that the percentage share of both male and female main workers has dropped over the last 5 decades. However, compared to only 8.3 per cent reduction in the male main workers, the female main workers have withdrawn from work in an alarming proportion of 21.3 per cent during the last fifty years. This is indicative of the fact that more and more females are either completely withdrawing from economically gainful activities, or are engaging themselves as marginal workers over time. While the earlier may be ascribed to increase of household income through remittances sent by male members working as migrant wage earners elsewhere, the latter may be due to dearth of work opportunities.

Table - 5.12
Decadal Change in Male and Female Main Workers: Chhota Udepur District (1961-2011)

Year	Male Main Workers		Female Main Workers	
	Number	Percentage	Number	Percentage
1961	99,764	57.7	58,444	35.9
1971	1,20,110	55.7	25,328	12.4
1981	1,45,657	56.5	30,336	12.2
1991	1,80,162	57.5	52,652	17.6
2001	1,92,942	49.9	70,359	19.0
2011	2,24,100	49.4	63,968	14.6

Figure- 5.14
Decadal Change in the Male and Female Main Workers: Chhota Udepur District (1961-2011)



5.8 Decadal Changes in Main Cultivators:

The existing farming systems in Chhota Udepur district can be categorized into two types: animal husbandry with agriculture, and animal husbandry with horticulture. The farming system is dependent on rain fed crop cultivation in either case. Seasonal migration during the dry seasons as labourers is the alternative livelihood for the tribal farmers. *Rabi* and *Kharif* Maize, pigeon pea, Bajra, and Wheat have remained the traditional food crops of the District. Cotton got introduced to the region only in the late sixties. Currently cotton is the prime crop of *Kharif* season. Summer green gram and oil seed (ground nut) did not receive much reception from the tribal farmers. Sugarcane production also could not make a difference due to delivery issues and stagnant yield (Govt. of Gujarat, 2020: 21).

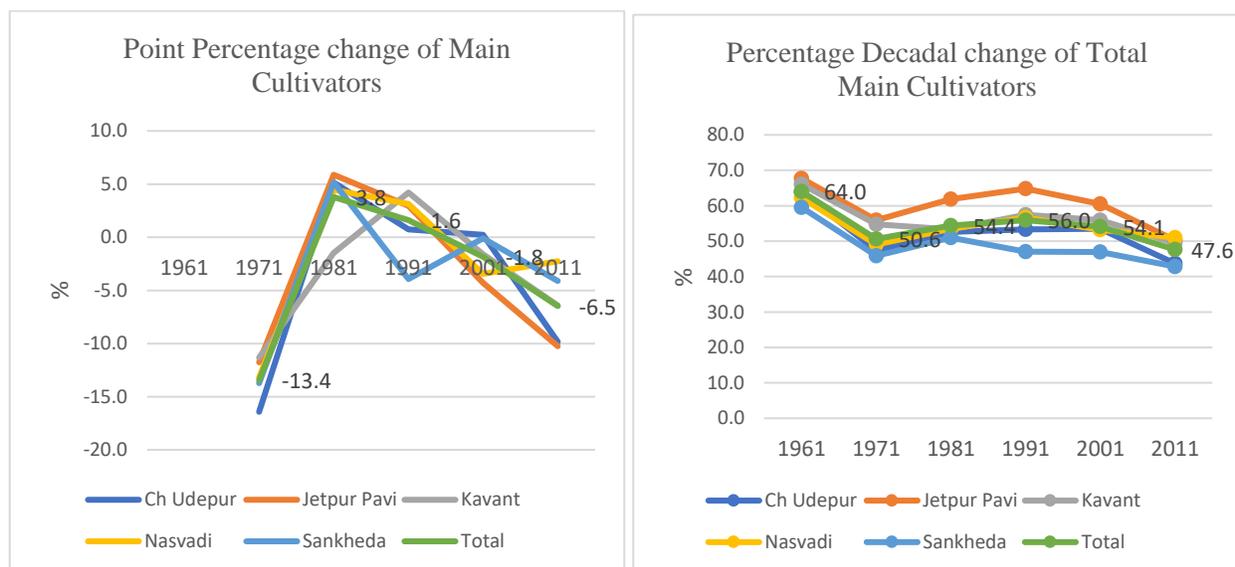
Primarily due to stagnate yield and irrigation problem, the agricultural system has reached a plateau and there is a decreasing trend of number of both male and female cultivators.

Table - 5.13
Decadal Change in Total Main Cultivators: Chhota Udepur District
(1961-2011)

Taluka/ District	Number /Percentage / Change	Number, Percentage and Point Percentage Change of Total Main Cultivators					
		1961	1971	1981	1991	2001	2011
Chhota Udepur	Workers	23,461	15,892	21,246	28,695	30,775	30,135
	Percentage	63.9	47.4	52.6	53.3	53.5	43.7
	Change	-	-16.4	5.2	0.7	0.2	-9.8
Jetpur Pavi	Workers	21,635	15,790	19,723	26,261	28,659	27,084
	Percentage	67.7	56.0	61.9	64.8	60.5	50.3
	Change	-	-11.8	5.9	2.9	-4.3	-10.2
Kavant	Workers	19,759	14,858	18,982	26,886	31,604	28,788
	Percentage	66.1	54.8	53.3	57.5	55.9	49.5
	Change	-	-11.3	-1.5	4.2	-1.6	-6.4
Nasvadi	Workers	21,670	16,648	21,373	31,229	30,737	33,748
	Percentage	62.3	49.1	53.5	56.7	53.2	51.0
	Change	-	-13.2	4.5	3.1	-3.5	-2.3

Sankheda	Workers	14,791	10,391	14,364	17,224	20,730	17,501
	Percentage	59.6	45.8	51.0	47.1	47.0	42.8
	Change	-	-13.7	5.2	-3.9	-0.1	-4.1
District	Workers	1,01,316	73,579	95,688	1,30,295	1,42,505	1,37,256
	Percentage	64.0	50.6	54.4	56.0	54.1	47.6
	Change	-	-13.4	3.8	1.6	-1.8	-6.5

Figure - 5.15
Decadal Change in the Total Main Cultivators: Chhota Udepur District (1961-2011)



Overall, among the five *talukas*, the average decadal growth rate was 8.9 per cent for main cultivators. The District witnessed a decrease in the proportion of cultivators in 1971 and main cultivators in 2011 by 14 per cent and 6.5 per cent respectively. The percentage share of total cultivators gradually rose after 1971 to 56 per cent before falling to 54 per cent in 2001 and 47.6 per cent in 2011. It is observed that all *talukas* show a similar trend.

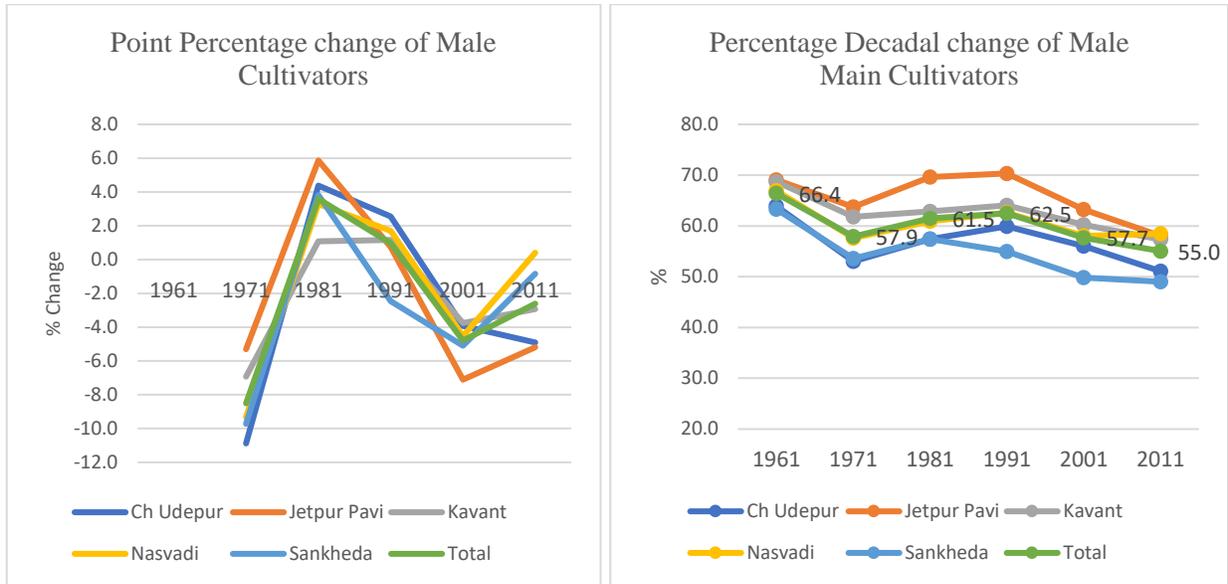
The percentage of total cultivators to total main workers in Chhota Udepur *taluka* reduced to 47.6 in 2011 from 63.9 per cent in 1961, a total reduction of around 20 per cent. In Jetpur Pavi and Kavant *talukas*, the decrease in the percentage of total cultivators was almost 17 per cent over the last 50 years. In Nasvadi *taluka*, the percentage of total main cultivators to total main workers has reduced from 62.3 per cent to 51.0 per cent, a total reduction of 11.3 per cent. Sankheda *taluka*

also shows the same trend of reduction in the percentage of total main cultivators in total main workers, falling nearly 17 per cent from 59.6 per cent to 42.8 percent over the last 5 decades.

Table - 5.14
Decadal Change in Main Male Cultivators: Chhota Udepur District
(1961-2011)

Taluka/ District	Number /Percentage / Change	Number, Percentage and Point Percentage Change of Main Male Cultivators					
		1961	1971	1981	1991	2001	2011
Chhota Udepur	Workers	14,722	14,698	19,925	25,269	24,520	26,614
	Percentage	63.9	53.0	57.4	59.9	56.0	51.1
	Change	-	-10.9	4.4	2.5	-3.9	-4.9
Jetpur Pavi	Workers	13,784	14,711	18,488	22,185	22,815	24,896
	Percentage	69.0	63.7	69.6	70.3	63.2	58.0
	Change	-	-5.3	5.9	0.7	-7.1	-5.2
Kavant	Workers	12,676	14,088	17,722	22,508	22,941	25,595
	Percentage	68.7	61.8	62.9	64.0	60.3	57.3
	Change	-	-6.9	1.1	1.2	-3.8	-2.9
Nasvadi	Workers	15,017	16,046	20,404	27,636	25,295	30,098
	Percentage	66.9	57.6	60.9	62.6	58.1	58.4
	Change	-	-9.3	3.3	1.7	-4.5	0.4
Sankheda	Workers	10,047	9,993	13,018	14,920	15,667	16,157
	Percentage	63.3	53.6	57.4	54.9	49.8	49.0
	Change	-	-9.7	3.8	-2.5	-5.1	-0.8
District	Workers	66,246	69,536	89,557	1,12,518	1,11,238	1,23,360
	Percentage	66.4	57.9	61.5	62.5	57.7	55.0
	Change	-	-8.5	3.6	1.0	-4.8	-2.6

Figure - 5.16
Decadal Change in the Male Main Cultivators: Chhota Udepur District
(1961-2011)

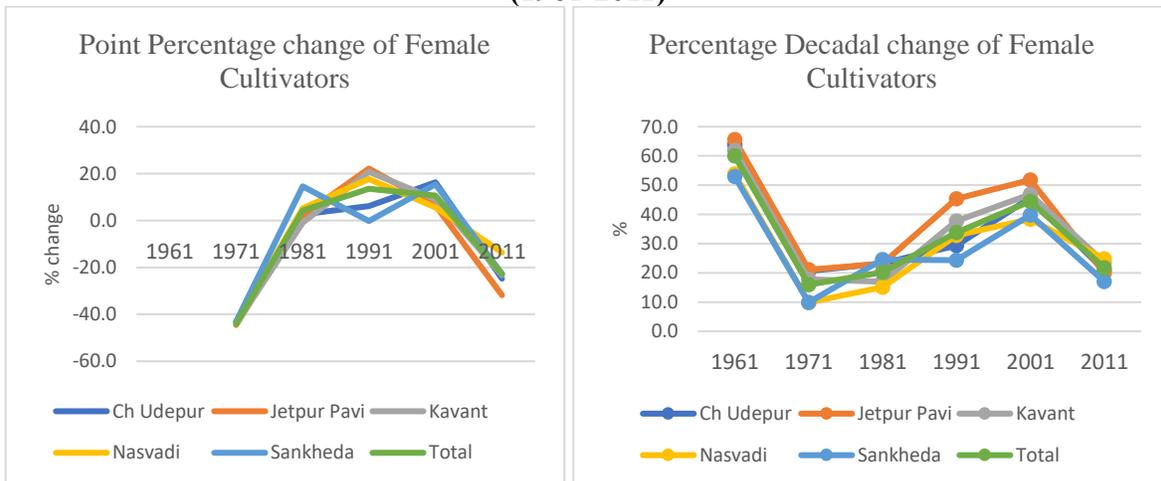


Share of male cultivators in the total male main workers in Chhota Udepur *taluka* has reduced by 12.8 per cent, from 63.9 per cent in 1961 to 51.1 per cent in 2011. In Jetpur Pavi *taluka*, the percentage of total male cultivators registered a reduction of 11 per cent between 1961 and 2011. An almost similar reduction in Kavant *taluka* has also been observed, where over the last 50 years, the percentage of male main cultivators among the male main workers reduced from 68.7 per cent to 57.7 per cent. In Nasvadi and Sankheda *talukas*, the reduction in the percentage of total male main cultivators is 8.5 and 14.3 per cent respectively over the two decades. The Chhota Udepur district as a whole witnessed 11.4 per cent drop of male main cultivators. Sankheda *taluka* has witnessed 14.3 per cent reduction in male main cultivators perhaps due to the available opportunities in other sectors and decreasing prospects of the agricultural sector.

Table - 5.15
Decadal Change in Female Main Cultivators: Chhota Udepur District
(1961-2011)

Taluka/ District	Number /Percentage / Change	Number, Percentage and Point Percentage Change of Female Main Cultivators					
		1961	1971	1981	1991	2001	2011
Chhota Udepur	Workers	8,739	1,194	1,321	3,426	6,255	3,521
	Percentage	63.8	20.7	23.3	29.4	45.7	20.9
	Change	-	-43.1	2.6	6.1	16.3	-24.8
Jetpur Pavi	Workers	7,851	1,079	1,235	4,076	5,844	2,188
	Percentage	65.6	21.0	23.2	45.4	51.8	19.9
	Change	-	-44.5	2.2	22.2	6.4	-31.9
Kavant	Workers	7,083	770	1,260	4,378	8,663	3,193
	Percentage	61.9	17.8	17.0	37.7	46.9	23.6
	Change	-	-44.1	-0.8	20.8	9.2	-23.3
Nasvadi	Workers	6,653	602	969	3,593	5,442	3,650
	Percentage	53.8	9.9	15.1	32.8	38.3	24.8
	Change	-	-43.9	5.2	17.7	5.6	-13.6
Sankheda	Workers	4,744	398	1,346	2,304	5,063	1,344
	Percentage	52.9	9.9	24.5	24.4	39.8	17.1
	Change	-	-43.0	14.6	-0.2	15.4	-22.8
District	Workers	35,070	4,043	6,131	17,777	31,267	13,896
	Percentage	60.0	16.0	20.2	33.8	44.4	21.7
	Change	-	-44.0	4.2	13.6	10.7	-22.7

Figure - 5.17
Decadal Change in the Female Main Cultivators: Chhota Udepur District
(1961-2011)



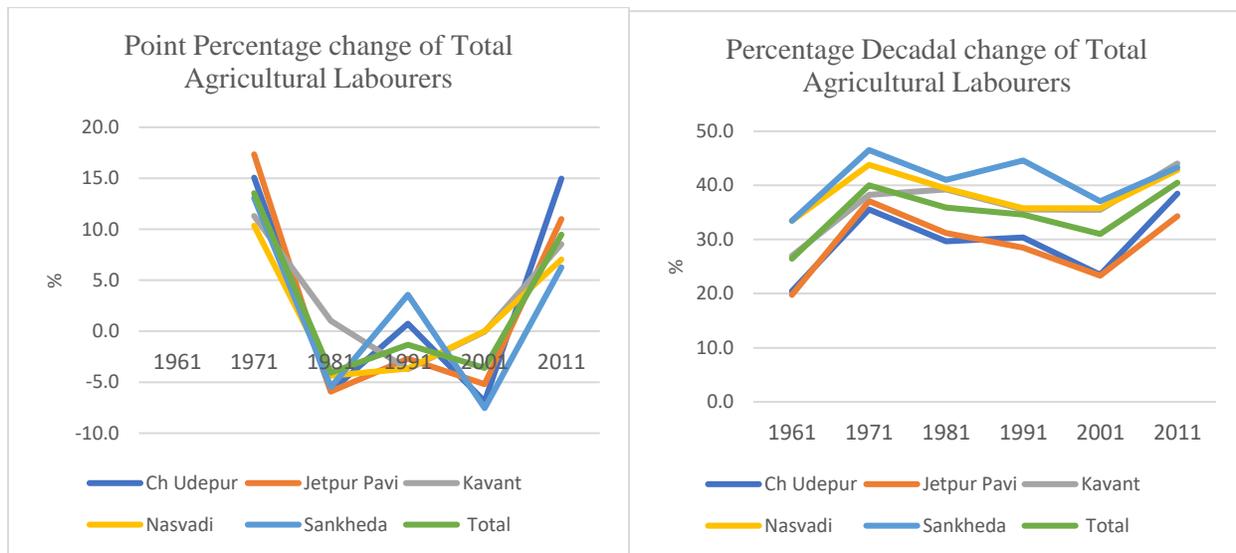
In Chhota Udepur district, nearly 38.3 per cent of female cultivators have laid off over the last 50 years. During the last two census decades, the maximum reduction of 22.7 per cent female main cultivators has taken place in the District. Among the *talukas*, Jetpur Pavi has registered the maximum decline of 31.9 per cent and, Nasvadi has registered the minimum decline of 13.5 per cent during the period in reference. Only around a fifth (21.7%) of the female main workers of the District registered themselves as main cultivators at the 2011 Census. Among all the *talukas*, the share of female main cultivators varied between the maximum of 24.8 per cent in Nasvadi and the minimum of 17.1 per cent in Sankheda *talukas*.

5.9 Decadal Changes in Main Agricultural Labourers:

Table - 5.16
Decadal Change in Total Main Agricultural Labourers: Chhota Udepur District (1961-2011)

<i>Taluka/</i> District	Number /Percentage / Change	Number, Percentage and Point Percentage Change of Total Main Agricultural Labourers					
		1961	1971	1981	1991	2001	2011
Chhota Udepur	Workers	7,517	11,900	11,978	16,351	13,505	26,518
	Percentage	20.5	35.5	29.7	30.4	23.5	38.5
	Change	-	15.1	-5.9	0.7	-6.9	15.0
Jetpur Pavi	Workers	6,313	10,468	9,947	11,547	11,036	18,474
	Percentage	19.8	37.1	31.2	28.5	23.3	34.3
	Change	-	17.3	-5.9	-2.7	-5.2	11.0
Kavant	Workers	8,065	10,383	13,989	16,624	20,078	25,619
	Percentage	27.0	38.3	39.3	35.6	35.5	44.0
	Change	-	11.3	1.0	-3.7	0.0	8.5
Nasvadi	Workers	11,640	14,859	15,745	19,713	20,669	28,355
	Percentage	33.4	43.8	39.4	35.8	35.8	42.8
	Change	-	10.3	-4.4	-3.7	0.0	7.0
Sankheda	Workers	8,309	10,547	11,558	16,331	16,367	17,693
	Percentage	33.5	46.5	41.0	44.6	37.1	43.3
	Change	-	13.1	-5.5	3.6	-7.5	6.2
District	Workers	41,844	58,157	63,217	80,566	81,655	1,16,659
	Percentage	26.4	40.0	35.9	34.6	31.0	40.5
	Change	-	13.5	-4.1	-1.3	-3.6	9.5

Figure - 5.18
Decadal Change in the Total Main Agricultural Labourers: Chhota Udepur District
(1961-2011)

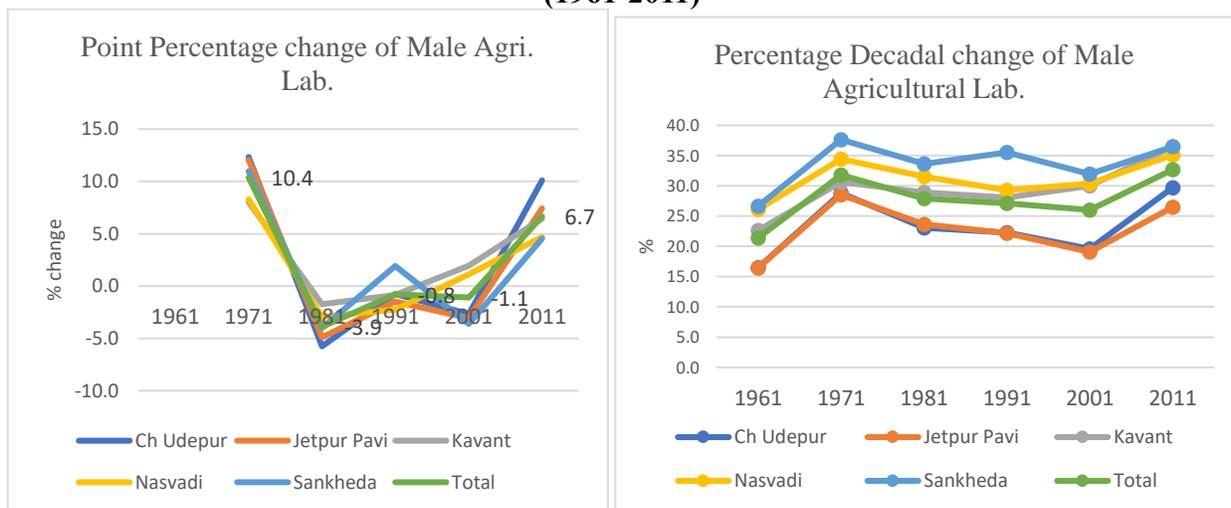


The share of main agricultural labourers in the total main workers of the District substantially increased from 26.4 per cent in 1961 to 40 per cent in 1971. Although there was a declining trend after 1971, it has increased again and has surpassed the 1971 level touching 40.5 per cent at the 2011 census count. The *talukas* also display a similar trend across the five census decades, with sudden increase at the 1971 Census followed by reduction till 2001, and increase at the last census of 2011. However, excepting for Chhota Udepur and Kavant *talukas*, no other *taluka* has surpassed the 1971 level. The remaining *talukas* have registered marginal reduction in the share of main agricultural labourers at the 2011 Census compared to 1971 Census. Jetpur Pavi *taluka* has the lowest proportion (34.3%) of main agricultural labourers followed by Chhota Udepur *taluka* (38.5%). Other three *talukas* have more than 40 per cent of the main workers working as agricultural labourers with Kavant *taluka* (44.0%) in the lead.

Table - 5.17
Decadal Change in Male Main Agricultural Labourers: Chhota Udepur District
(1961-2011)

Taluka/ District	Number /Percentage / Change	Number, Percentage and Point Percentage Change of Male Main Agricultural Labourers					
		1961	1971	1981	1991	2001	2011
Chhota Udepur	Workers	3,796	7,987	8,004	9,400	8,590	15,479
	Percentage	16.5	28.8	23.1	22.3	19.6	29.7
	Change	-	12.3	-5.8	-0.8	-2.7	10.1
Jetpur Pavi	Workers	3,285	6,581	6,275	6,986	6,886	11,366
	Percentage	16.5	28.5	23.6	22.1	19.1	26.5
	Change	-	12.1	-4.9	-1.5	-3.1	7.4
Kavant	Workers	4,177	6,991	8,156	9,870	11,427	16,287
	Percentage	22.6	30.7	28.9	28.1	30.0	36.5
	Change	-	8.0	-1.7	-0.9	1.9	6.5
Nasvadi	Workers	5,864	9,591	10,558	12,918	13,247	18,078
	Percentage	26.1	34.4	31.5	29.3	30.4	35.1
	Change	-	8.3	-2.9	-2.3	1.1	4.7
Sankheda	Workers	4,232	7,020	7,629	9,655	10,038	12,028
	Percentage	26.7	37.6	33.6	35.6	31.9	36.5
	Change	-	11.0	-4.0	1.9	-3.6	4.5
District	Workers	21,354	38,170	40,622	48,829	50,188	73,238
	Percentage	21.4	31.8	27.9	27.1	26.0	32.7
	Change	-	10.4	-3.9	-0.8	-1.1	6.7

Figure - 5.19
Decadal Change in the Male Main Agricultural Labourers: Chhota Udepur District
(1961-2011)



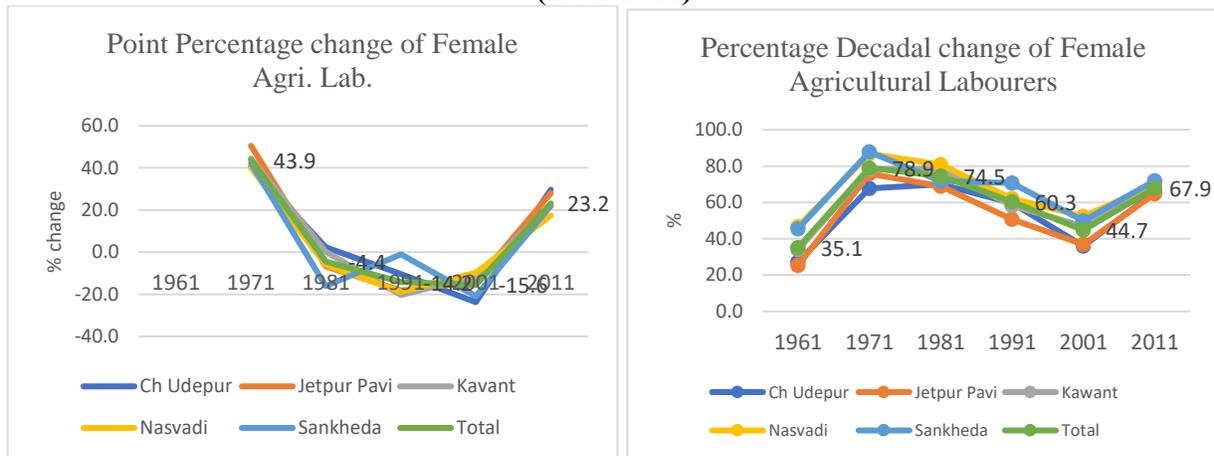
Relatively lesser proportion (32.7%) of the males in the District are engaged as main agricultural labourers. However, the trend of change in the proportion has been similar to the total main agricultural labourers of the District. More than 10 point percentage increase in the share of main male agricultural labourers can be seen during the 1961 (21.4%) and 1971 (31.8%) Census decade. After gradual decrease for three decades after 1971, the proportion of male main agricultural labourers in the District has jumped above the 1971 level and touched 32.7 per cent at the 2011 enumeration. The trend can be seen being replicated in all the five *talukas* over the five census decades. All *talukas* experienced sudden increase in the share of male main agricultural labourers at the 1971 count, and after minor decrease over the next three decades reached the 1971 level with minor variations. Excepting for Jetpur Pavi and Sankheda *talukas*, all *talukas* have slightly more percentage of male main agricultural labourers than they had at the 1971 count.

A study conducted by the International Labour Organization (ILO) on ST and SC female participation in work reports that, the probability of their participation in the labour market increases if the head of the household is a female and the household is in possession of some cultivable land. There is a negative effect on this probability in case the woman has a child of less than five years of age or the household has many members. Women in households with higher consumption expenditure are less likely to be economically active as compared to women from lower household consumption expenditure. These results confirm that women belonging to households where the primary source of income is agriculture are more likely to participate in the labour market. Thus, the decline in agricultural activity associated with economic development likely has an impact on rural female labour force participation in India (Kapsos et. al, op. cit: 27).

Table - 5.18
Decadal Change in Female Main Agricultural Labourers: Chhota Udepur District
(1961-2011)

Taluka/ District	Number /Percentage / Change	Number, Percentage and Point Percentage Change of Female Main Agricultural Labourers					
		1961	1971	1981	1991	2001	2011
Chhota Udepur	Workers	3,721	3,913	3,974	6,951	4,915	11,039
	Percentage	27.2	67.7	70.0	59.6	35.9	65.6
	Change	-	40.5	2.3	-10.3	-23.7	29.7
Jetpur Pavi	Workers	3,028	3,887	3,672	4,561	4,150	7,108
	Percentage	25.3	75.8	69.0	50.8	36.8	64.7
	Change	-	50.5	-6.8	-18.2	-14.0	27.9
Kavant	Workers	3,888	3,392	5,833	6,754	8,651	9,332
	Percentage	34.0	78.4	78.5	58.2	46.8	69.0
	Change	-	44.4	0.1	-20.3	-11.4	22.1
Nasvadi	Workers	5,776	5,268	5,187	6,795	7,422	10,277
	Percentage	46.7	86.7	80.8	62.0	52.3	69.7
	Change	-	40.0	-5.9	-18.8	-9.7	17.4
Sankheda	Workers	4,077	3,527	3,929	6,676	6,329	5,665
	Percentage	45.5	87.8	71.6	70.7	49.8	71.9
	Change	-	42.3	-16.1	-1.0	-20.9	22.1
District	Workers	20,490	19,987	22,595	31,737	31,467	43,421
	Percentage	35.1	78.9	74.5	60.3	44.7	67.9
	Change	-	43.9	-4.4	-14.2	-15.6	23.2

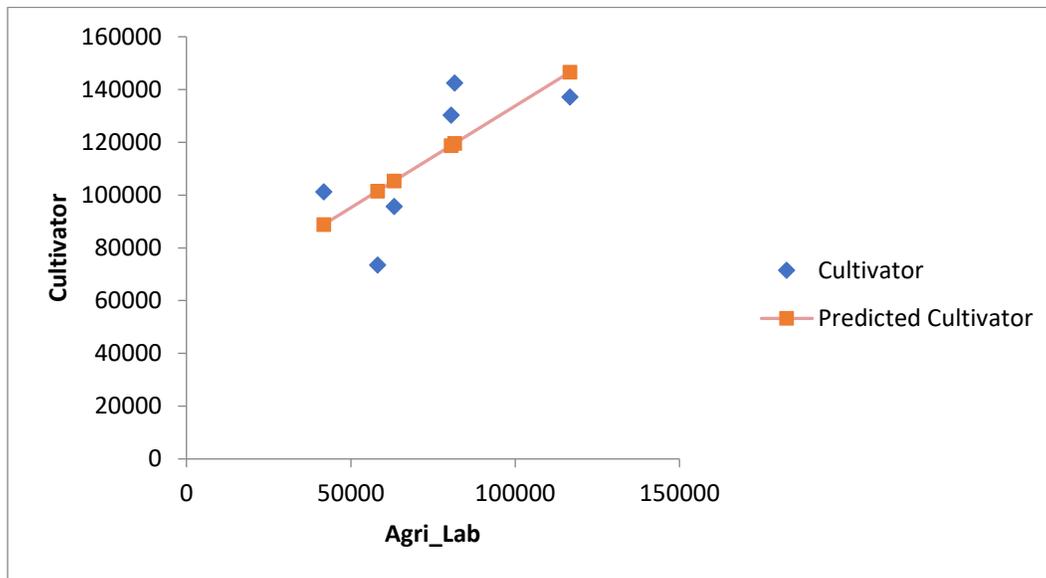
Figure - 5.20
Decadal Change in the Female Main Agricultural Labourers: Chhota Udepur District
(1961-2011)



As evident from Table - 5.18 and Figure - 5.18, the participation of women of the District as main agricultural labourers increased remarkably in 1971, crossing the three-fourth (78.9%) mark. But then onwards, their proportion consistently decreased till 2001 before rising again in 2011. Although the female participation as main agricultural labourers in the District has not crossed the 1971 level at the 2011 Census enumeration, the increasing trend has started and almost two-third (67.9%) of the female main workers have reported as agricultural workers. The same trend can be observed in all *talukas* of the District over the period in reference where, Jetpur Pavi *taluka* has the lowest (64.7%) and Nasvadi *taluka* has the highest (71.9%) of female main agricultural labourers.

5.10. Relationship between Cultivators and Agricultural Labourers:

Figure - 5.21
Regression Analysis between Cultivators and Agricultural Labourers



Regression Statistics Summary Output

Multiple R	0.726118993
R square	0.527248792

	P value	Lower 95%	Upper 95%
Change in Total Agricultural Labourers.	0.102244191	-0.242545568	1.784861334

There is a fair linear relationship between the variables. However, the p-value exceeds the significance level of 5 per cent. Also, the 95 per cent class interval contains 0, which implies the true value of the predictor variable may be also 0. So, the relationship cannot be considered as significant.

5.11. Decadal Changes in Marginal Workers:

As marginal workers work for less than three months in any economically gainful activity, their sustainability and other livelihood status remain below poverty level. The national poverty line for 2011-12 was estimated at Rs. 816 per capita per month for rural areas and Rs. 1,000 per capita per month for urban areas (Gaur and Rao, 2020: 6). It is quite rational that to increase agricultural growth for poverty reduction and raising per capita income in the rural areas, following factors are crucial:

- Rising cost of production
- Input intensive farming
- To withstand climate shock with surplus management
- Food security, nutrition and health
- Farm mechanization

The problem is, with only 1 to 2 hectares of land for cultivation or sharecropping, it is near impossible for tribal cultivators to produce enough for the whole year. Besides, due to almost complete dependence on rains, cultivation in the region is restricted to the four months of monsoon season. In the absence of agricultural activities during the remaining 8 months of the year, the labour force tends to depend on non-agricultural subsidiary professions as marginal workers. An attempt has been made in this section to analyze the changes in the number and proportions of marginal workers in the study area. The time period considered is limited to 1981 to 2011, as data pertaining to this segment of workers is not available for the earlier census decades.

During the period in reference, the marginal workers accounted for one-fourth to two-fifth of the total workforce in the District and in the *talukas*. It is important to note that there has been almost 15 to 20 per cent increase in the share of marginal workers during the last thirty years. From 23.9 per cent in 1981, their proportion has reached 37.4 per cent in 2011 in the District as a whole. A similar trend is also observed in all the *talukas* of the District, where one finds consistent increase

in the share of marginal workers almost touching the 40 per cent mark in 2011, particularly in Jetpur Pavi (39.9%) and Nasvadi (39.5%) talukas. Remaining all talukas have more than 35 per cent marginal workers, excepting Sankheda (34.2%) which is slightly lagging behind.

Table - 5.19
Decadal Change in Total Marginal Workers: Chhota Udepur District
(1981-2011)

<i>Taluka/</i> District	Number /Percentage / Change	Number, Percentage and Point Percentage Change of Total Marginal Workers			
		1981	1991	2001	2011
Chhota Udepur	Workers	13,076	22,240	34,355	38956
	Percentage	24.5	29.2	37.4	36.1
	Change	-	4.8	8.2	-1.3
Jetpur Pavi	Workers	10,790	18,314	29,846	35,829
	Percentage	25.3	31.1	38.7	39.9
	Change	-	5.8	7.5	1.3
Kavant	Workers	10,517	15,953	26,161	32,603
	Percentage	22.8	25.4	31.6	35.9
	Change	-	2.6	6.2	4.3
Nasvadi	Workers	13,499	23,591	37,086	43,305
	Percentage	25.3	30.0	39.1	39.5
	Change	-	4.7	9.1	0.4
Sankheda	Workers	7,325	10,870	18,444	21,185
	Percentage	20.6	22.9	29.5	34.2
	Change	-	2.3	6.6	4.7
District	Workers	55,207	90,968	1,45,892	1,71,878
	Percentage	23.9	28.1	35.7	37.4
	Change	-	4.2	7.6	1.72

Figure - 5.22
Decadal Change in the Total Marginal Workers: Chhota Udepur District
(1981-2011)

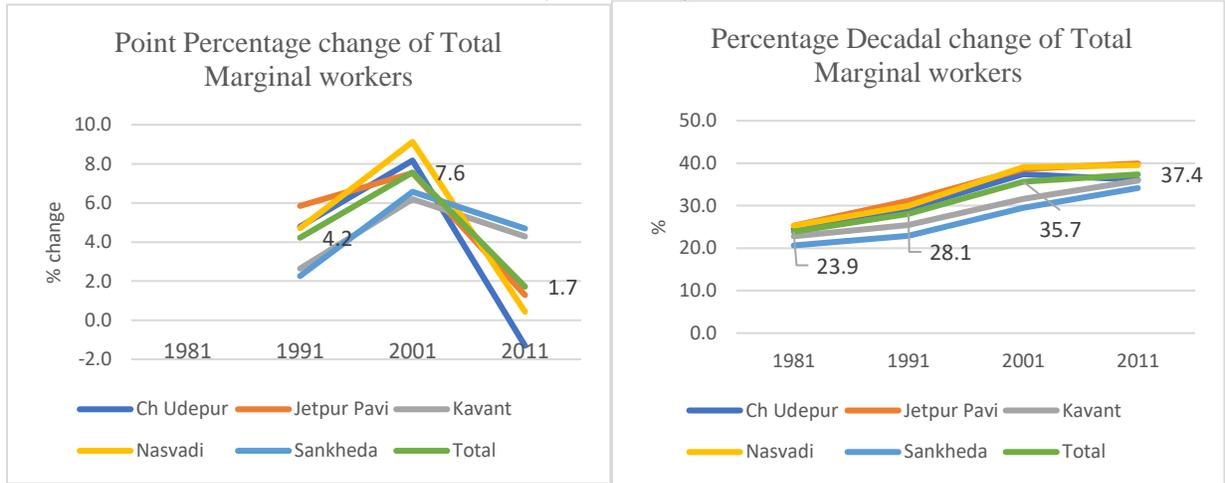


Table - 5.20
Decadal Change in Male Marginal Workers: Chhota Udepur District
(1981-2011)

<i>Taluka/</i> District	Number /Percentage / Change	Number, Percentage and Point Percentage Change of Male Marginal Workers			
		1981	1991	2001	2011
Chhota Udepur	Workers	530	479	7,641	10,137
	Percentage	1.5	1.1	14.9	16.3
	Change	-	-0.4	13.7	1.4
Jetpur Pavi	Workers	142	418	5,622	7,759
	Percentage	0.5	1.3	13.5	15.3
	Change	-	0.8	12.2	1.8
Kavant	Workers	442	384	5,987	7,809
	Percentage	1.5	1.1	13.6	14.9
	Change	-	-0.5	12.5	1.3
Nasvadi	Workers	480	383	7,232	10,125
	Percentage	1.4	0.9	14.2	16.4
	Change	-	-0.6	13.4	2.2
Sankheda	Workers	350	147	3,757	4,950
	Percentage	1.5	0.5	10.7	13.1
	Change	-	-1.0	10.1	2.4
District	Workers	1,944	1,811	30,239	40,780
	Percentage	1.3	1.0	13.5	15.4
	Change	-	-0.3	12.6	1.8

Figure - 5.23
Decadal Change in the Male Marginal Workers: Chhota Udepur District
(1981-2011)

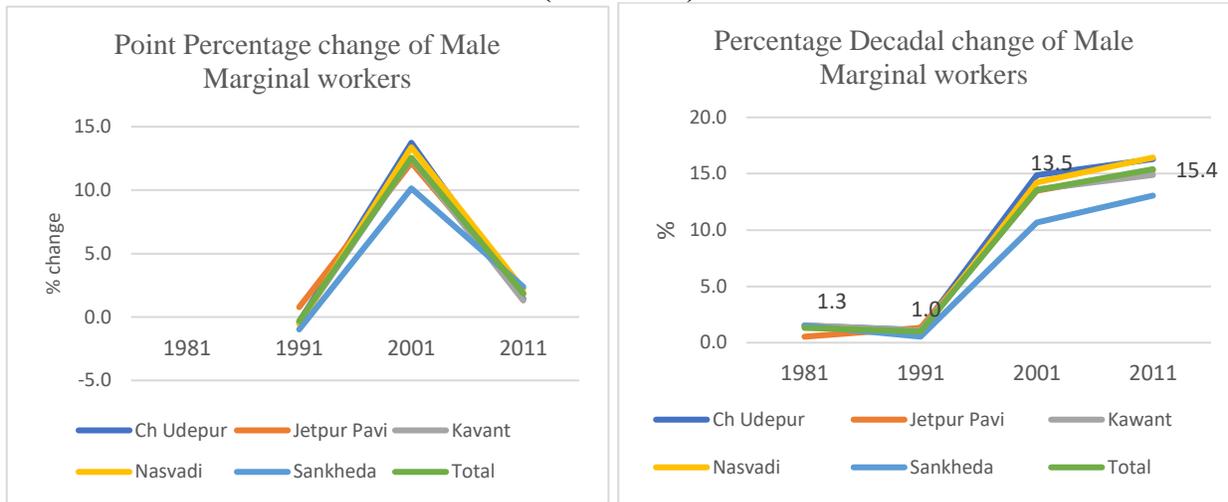
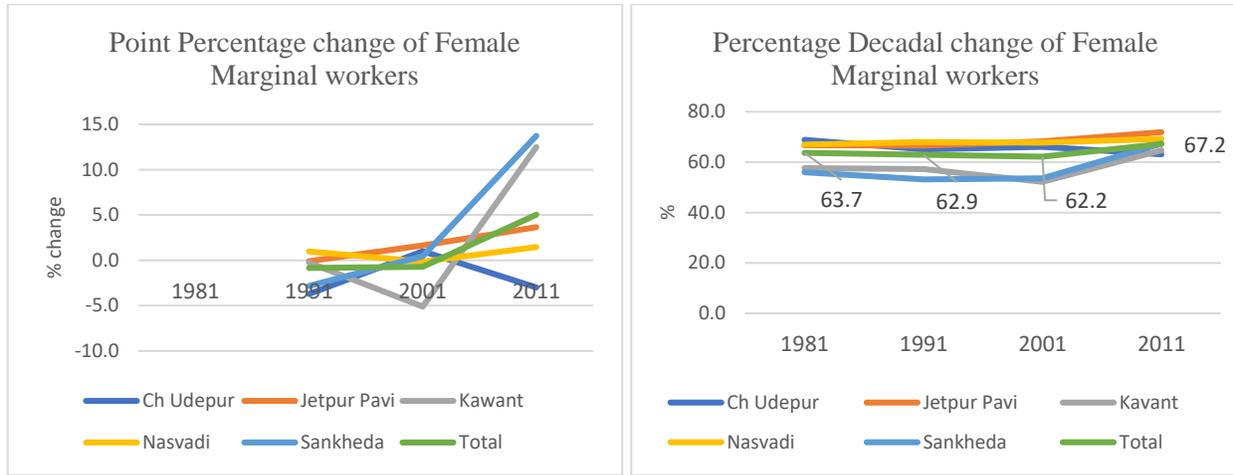


Table - 5.21
Decadal Change in Female Marginal Workers: Chhota Udepur District
(1981-2011)

Taluka/ District	Number /Percentage / Change	Number, Percentage and Point Percentage Change of Female Marginal Workers			
		1981	1991	2001	2011
Chhota Udepur	Workers	12,546	21,761	26,714	28,819
	Percentage	68.8	65.1	66.1	63.1
	Change	-	-3.7	1.0	-3.0
Jetpur Pavi	Workers	10,648	17,896	24,224	28,070
	Percentage	66.7	66.6	68.2	71.9
	Change	-	-0.1	1.6	3.7
Kavant	Workers	10,075	15,569	20,174	24,794
	Percentage	57.6	57.3	52.2	64.7
	Change	-	-0.3	-5.1	12.5
Nasvadi	Workers	13,019	23,208	29,854	33,180
	Percentage	67.0	67.9	67.8	69.2
	Change	-	1.0	-0.1	1.5
Sankheda	Workers	6,975	10,723	14,687	16,235
	Percentage	56.0	53.2	53.6	67.3
	Change	-	-2.8	0.4	13.7
District	Workers	53,263	89,157	1,15,653	1,31,098
	Percentage	63.7	62.9	62.2	67.2
	Change	-	-0.8	-0.7	5.0

Figure - 5.24
Decadal Change in the Female Marginal Workers: Chhota Udepur District
(1981-2011)



There is an exceptional increase in the share of male marginal workers during the last 30 years in the District. Nearly 15 per cent increase of male marginal workers in the total male workers has taken place during the last three decades. It is noteworthy that a very small proportion (< 2%) of the male workers engaged themselves as marginal workers at the beginning year of 1981. Their proportion remained by and large unaltered till 1991, following which the increase has been significant. The 2011 Census has registered more than 15 (15.4%) per cent of the male workers of the District as marginal workers. Among the *talukas*, Nasvadi (16.4%) and Chhota Udepur (16.3%) display the highest, and Kavant (14.9%) and Sankheda (13.1%) display the lowest percentage of male marginal workers.

Among the females of the study area, majority are marginal workers. About two-third (67.2%) of the women workers of the District registered themselves as marginal workers at the 2011 Census. It may be pointed out here that unlike the proportion of male marginal workers, the proportion of female marginal workers has remained consistently high during all the census decades in reference. Besides, their share has been slowly but consistently increasing over the years with minor fluctuations. It is only in the Chhota Udepur *taluka*, the share of female marginal workers has marginally reduced from 68.8 per cent in 1981 to 63.1 per cent in 2011. As per the 2011 Census enumeration, while Jetpur Pavi *taluka* has the highest (71.9%) percentage of female

marginal workers, after Chhota Udepur (63.1%), Kavant *taluka* (64.7%) has the lowest percentage of such females.

From the above analysis of the work participation rates in the study area, the following two facts clearly emerge.

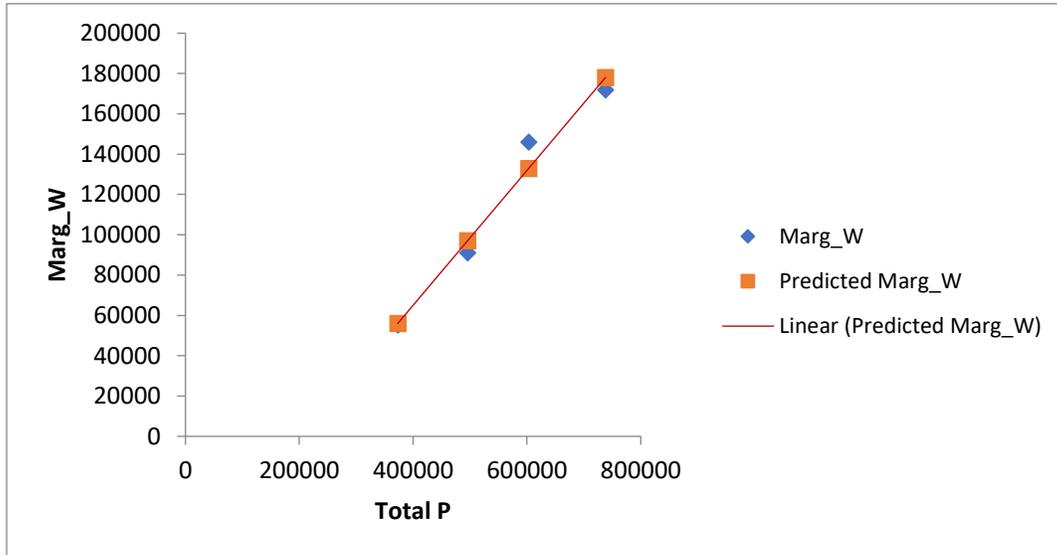
1) At the beginning of the reference period (1981), the share of marginal workers in the total workforce of the *talukas* was highly negligible. During the last three decades, starting from 1981, it has increased by 13 to 15 per cent. Besides, while the proportions of male main workers and male main cultivators are decreasing, the proportion of male marginal workers is increasing. Based on this fact, it would not be wrong to assume that the male segment of the tribal area under scrutiny is gradually moving away from agricultural operations and getting absorbed in other economic pursuits for sustenance.

2) During the time period under consideration, the female marginal workers have accounted for a very large proportion (nearly 70%) of the total female workforce of the study area. Further, their share has been increasing consistently over the decades in all *talukas*.

The increase in proportion of wage labourers compared to the proportion of cultivators has been viewed by Karat et. al. as an example of the process of proletarianization, in which a substantial section of the tribes is brought out clearly as there is a sharp increase in the number of tribal wage labourers and decrease in the number of cultivators (Karat et. al., 2014: 140). Based on these facts about the work participation in Chhota Udepur district, it would not be out of place to anticipate significant social and structural changes in the tribal society. This anticipation sounds more practical considering the skill level of the tribal population of the region and, the nature of their employment as migrant wage labourers in the unorganized sectors of the nearby urban centers.

5.12. Relationship between Marginal Workers and Total Population:

Figure - 5.25
Regression Analysis between Marginal Workers and Total Population



Regression Statistics Summary Output

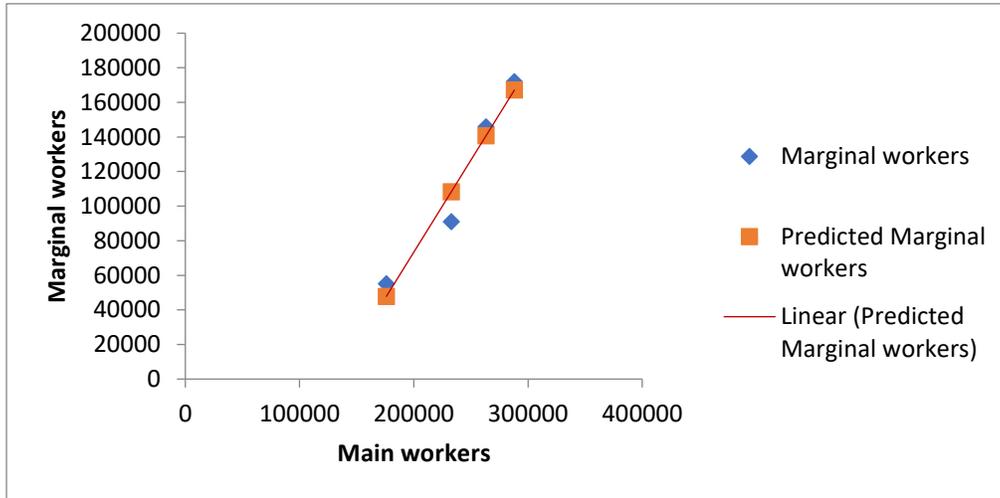
Multiple R	0.991454258
R square	0.982981546

	P value	Lower 95%	Upper 95%
Change in Total Population	0.008545742	0.18526629	0.432618862

For the given linear regression, the predictor variable is strongly accountable for 98.2 per cent of the results. The p-value is 0.008, which is much lower compared to the threshold value of 0.05. In addition, the 95 per cent confidence interval also does not contain 0. All these observations imply that the number of marginal workers is increasing with increase in population and our model is statistically significant. With the increase in total population the number of marginal workers is increasing in the District.

5.13. Relationship between Marginal Workers and Main Workers:

Figure - 5.26
Regression Analysis between Marginal workers and Main workers



Regression Statistics Summary Output

Multiple R	0.975466367
R square	0.951534633

	P value	Lower 95%	Upper 95%
Change in Total Main worker Population	0.024533633	0.333574216	1.795395005

Here we can observe that the predictor variable accounts for 95.13 per cent of the results of the dependent variable. The p-value of 0.024 is smaller than the threshold of 0.05. The 95 per cent confidence interval also does not contain 0, making our model statistically significant. There is a positive correlation between main workers and marginal workers as inferred from the linear regression.

From the above information, there is a need of specific planning for the Chhota Udepur district. There is an enormous increase in the male and female agricultural labourers than cultivators in the District. Percentage of marginal workers for both males and females, during the past 50 years is increasing along with total population but, not at par with percentage share of agricultural labourers. As the land holding sizes of the tribal farmers are mostly marginal and small,

managing them with the help of family labour becomes possible. Rain fed farming, the hilly terrain, and depleted forests have transformed the tribal habitats into ecological exile zones. So, these regions hardly develop to be the core regions of development according to the Growth Pole Theory⁸ by Perroux. In the context of the backward regions of the Nation, there is a high concentration of tribals in the backward sub-districts flanked by the most advanced sub- districts which are centers of growth and development. Surprisingly, instead of ideal pattern of development extending in concentric circles, there is a core-periphery contrast in most of the tribal districts (Bakshi et. al., 2015: 50). In Chhota Udepur district, the development for the employment sector is characterized by disguised unemployment, seasonal migration, and uncertainty of job opportunities.

There are several development schemes to reinforce the tribal farmers and their livelihood, but the desired results of poverty mitigation are not being visible. Dash correctly described this situation as ‘blanket cover’ as these planned efforts have emasculated the tribal areas to develop their self-sustaining authentic perseverance (Dash, 2009; 247).

5.14 Other Agricultural Sectors:

Allied sectors like horticulture, animal husbandry, poultry farming, goat farming and fisheries are other important integral part of tribal economy in Chhota Udepur district. The demand for the products of allied agricultural activities is increasing day by day. The main thrust is on dairy and vegetable farming. The rising demand of these allied agricultural products not only supports farmers' income, but also adds nutritional value to the diet of the tribal population.

5.15 Horticulture:

Horticulture in the District has started prospering due to technical support extended by the National Horticultural Mission (NHM), and favourable agro-climatic conditions, soil and marketing opportunities. Mango, Banana, Guava, Papaya, Custard Apple, Sapodilla and all major vegetables including high value chillies are grown in the District currently.

⁸ The Growth Pole Theory was proposed by Francois Perroux in 1955. He postulated that economic growth could be generated by concentrating investment in specific regions or cities.

5.16 Animal Husbandry:

Mehsani or Surati buffalo is the principal livestock of the farmers of Chhota Udepur district. Dairy farms provide employment to a large number of landless families in rural areas. *Rashtriya Krishi Vikas Yojana* (RKVY) is organizing different extension programmes for farmers to improve the health of animals and increase milk production. To combat high calf mortality and menace of diseases along with malnutrition of the animals, especially to support poor farmers, veterinary services need to be strengthened with mobile medical facilities.

5.17 Poultry Development and Promotion of Backyard Poultry:

Though poultry farming is considered as an allied sector of agriculture, now it is one of the important independent commercial activities in the District. Availability of ready market is the most favourable condition for the production of poultry birds. One important feature of poultry farming is the contract farming with hatcheries. The backyard poultry farming with eggs and meat of the birds as the main products, is practiced in tribal areas of all the five *talukas*. The growing urbanization is boosting the market for poultry products.

5.18 Sheep and Goat Rearing:

For the sustenance and livelihood security of tribal farmers and landless rural labourers, the rearing of sheep and goat is an important economic activity. Unfortunately however, there is a dearth of open pastures in the District forbidding large scale sheep and goat rearing.

5.19 Fisheries:

The fish farming in Chhota Udepur is mostly done in village/panchayat ponds on lease. Weak infrastructure, need of genetic up gradation and lack of extension services are compensated by different ongoing schemes supported by the Central Government like:

1. Mission mode programme for aquaculture development
2. Development of inland fisheries and aquaculture
3. National scheme for welfare of fishermen
4. Fisheries training and extension
5. Strengthening of database and information and networking for the fisheries sector

6. Schemes under RKVY (Govt. of Gujarat, 2020: 84-91)

5.20 Other Opportunities for Livelihood, MGNREGA:

Scenario of other work opportunities in the study area should be taken into consideration, so that there will be understanding of all avenues of employment related or not related to agriculture. The National Rural Employment Guarantee Act of 2006, (NREGA), renamed as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in October 2009, is an initiative by the Government of India for raising the productive employment opportunities for rural people on a large scale. The highlights of MGNREGA are:

- MGNREGA provides 100 days of work to all the job-seeking adults in the household.
- There is a minimum statutory income to avoid labour exploitation.
- The State Government bears the fiscal burden if it could not provide jobs to any applicant.
- Involving Panchayat Raj Institution, this Act approaches planned employment.
- It not only supports immediate livelihood but also creates long-term livelihood assets in rural areas like drought proofing, water conservation, irrigation and land development.
- More than 75 per cent cost is covered by the Central Government and a small part by the State.

MGNREGA is providing employment to people and developing social forestry in Chhota Udepur district as well. The important activities initiated by MGNREGA in collaboration with Forest Department, Water Resource Department, Environment and Forest Department, and Agriculture Department with MGNREGA are rainwater harvesting, dug wells, group irrigation wells, vermicomposting, lift irrigation and other agricultural and afforestation activities. Aiming at the future, the villagers were expected to get allocation of 54.21 lakhs up to March 2018, which was 2.19 per cent of the total allotment by the Gujarat government and 28,233 man-days created⁹ (2.39 per cent of total work generated in the State) (Govt. of Gujarat, 2017: 13).

⁹ Man-Days: A Day regarded in terms of the amount of work that can be done by one person within this period.

5.21 Entrepreneurial Opportunities:

Tribal development has remained government dependent. Absence of job opportunities is driving the educated tribal youth either to take up daily wage labourers in unorganized sectors or to migrate intra-state or inter-state for sustenance. These tribal young people do have potential for work but they lack skill in industrial jobs. To create awareness and encourage rural youth, the Smart Village Movement (SVM) in collaboration with the Centre for Entrepreneurship Development Programme (CED), organized an Entrepreneurship Awareness Programme on March 23, 2023 in Jetpur Pavi *taluka* of Chhota Udepur district. The objective of the programme is to provide farming and non-farming training to create interests among participants to start a business (Smart Village Movement, 2023). Udyam registration is a certificate by which entrepreneurs can get subsidized credit. In Chhota Udepur district by 29th November 2022, out of the total number of 2,720 enterprises registered under Udyam Aadhar Registration, 2,650 (97.4%) are micro, 67 (2.46%) are small and only 3 (0.1%) are medium enterprises (Govt. of Gujarat, 2023c: S48).

5.22 Self Help Groups:

The Self-Help Groups¹⁰ (SHG) movement based on the principles of teamwork, microfinance and small credit has existed in India for the last 50 years in one form or the other. India has around 1.2 crore SHGs, of which 88 per cent are all women groups. Some important examples are *Kudumbashree* in Kerala, *Jeevika* in Bihar, *Mahila Aarthik Vikas Mandal* in Maharashtra and *Looms of Ladakh*. Under Pradhan Mantri Garib Kalyan Yojana (PMGKY), the limit for collateral free loans for women SHGs was doubled from 10 lakhs to 20 lakhs. National Rural Livelihoods Mission (NRLM) allowed for an additional vulnerability reduction fund of 1.5 lakhs to be extended to village organizations in Covid hotspot areas (Govt. of India, 2023: 162). Institute for Social Enterprises and Entrepreneurs for Development (ISEED), at Institute of Rural Management (IRMA) and Aga Khan Rural Program India (AKRSPI) in collaboration with Gujarat Tribal Development Corporation (GTDC), organized a workshop for promoting and creating awareness of entrepreneurship among tribal people in March 2019.

¹⁰ SHG- it is a socially and economically homogenous group of 20 persons collectively and voluntarily formed for the purpose of savings and credit with no collateral for loans.

5.23 Periodic Migration:

Migration can be rural to rural or rural to urban or many more dimensions. The tribal population of all the *talukas* of Chhota Udepur district are forced to move out every year in a periodic way in search of income or in search of livelihood for sustenance. Rain fed farming, absence of adequate irrigational facilities, fragmented, small size of holdings are not suitable for farm mechanization. Poverty ridden farmers do not have input-intensive or knowledge intensive farming technology. Marriage and employment are the two basic reason for migration for the tribal women in Gujarat. Nearly one-third members of all households migrate from the tribal districts of Narmada, The Dangs, Surat and Chhota Udepur districts. Tribal people from the Chhota Udepur district either go as farm labourers to Rajkot and Kachchh, or they go to Surat for diamond polishing work. For each work there is a specific community from a specific pocket/region. Members of other tribal communities cannot enter suddenly. Wages are not regular as this is an unorganized sector (SIDBI, 2021: 44,45).

5.24 Decadal Changes in Amenities:

Available amenities in a place and their proper utilization or in a nutshell, infrastructural base strengthens the locational advantages for development of the economy. The proportion of villages in all the *talukas* of Chhota Udepur district has been improving with respect to basic infrastructural facilities, specially pertaining to educational institutions and drinking water facilities. As stated earlier, the District has 1,396 primary schools, 76 secondary schools and 92 higher secondary schools. There are 7 arts and science colleges and 3 teachers' training colleges. However, the district is devoid of any University institutions offering Management of Business Administration (MBA), Masters in Computer Application (MCA), Pharmacy or Engineering courses. Only one Diploma Engineering College and eight Industrial Training Institutes are there in the District (Govt. of Gujarat, 2022: 51-60). The observation from the secondary sources like government publications and computed data reveals that percentage of schools providing Mid-Day Meal (MDM) in Chhota Udepur district is 3.86 per cent out of total MDM schools in the State and percentage share of MDM benefitted students in the district is 2.09 per cent out of the total beneficiaries in the State. In the districts, 1,263 schools have the facilities of MDM, where 1,13,447

students get the (MDM). Further, working in the field and/or moving with parents during the periodic migrations adversely affect the level of educational attainment of the tribal youth.

According to the 2011 Census, drinking water facilities are available in 100 per cent villages of all the *talukas*. Throughout Gujarat during 2021-22, 350 villages of tribal areas were covered with potable drinking water at the rate of 100 liters per capita per day. Another 62 rural regional water supply schemes are under progress with an estimated cost of Rs. 3,885 crores. Other major initiatives are installations of hand pumps and mini pipe water supply in the tribal areas. The household water tap connectivity within the house has increased from 4 per cent in 2001 to 100 per cent in 2022. By October 2022, under the regional water supply scheme, there are 329 villages facilitated with the water from Narmada and 44 villages from other sources in the Chhota Udepur district. Under the individual water supply scheme, mini pipe scheme has reached 157 villages, simple well to 24 villages, and hand pumps to 53 villages.

Other amenities like, transport and communication facilities available in the villages are well developed covering more than 93 per cent of villages in every *taluka* of the District (Table - 5.22). At the end of the 2020-21, the total road length in the entire State was 81,523 kms, of which, 80,272 kms and 1,251 kms were surfaced and un-surfaced respectively. In Chhota Udepur district there are no un-surfaced roads, whereas in other districts there are un-surfaced roads, which accounts to 1.53 per cent of the total road length of the State. Out of the total road length in Chhota Udepur district, 49.1 per cent is Village Road, 3.1 per cent is District Road, 14 per cent is State Highway and 5.6 per cent is National Highway (Govt. of Gujarat, 2022: 78). According to 2021-22 statistics, the total number of registered vehicles in the District was only 1.18 per cent of the total number of registered vehicles in the State (Govt. of Gujarat, 2023c: S-80).

Electrification of villages was another area of good example of development in the Chhota Udepur district. Near about 100 per cent villages had come under electric power supply by 2011. During the 2010-11 period, the per capita consumption rose to 1,512 kilowatt-hours (KWH) for the whole State. *Jyoti Gram Yojana* (JGY) was an initiative of GoG to ensure that a 24-hour three phase quality power supply is available in the rural areas of the State and to the farmers for agricultural purposes. The schemes were announced in 2006 by the then President of India, A. P. J. Abdul Kalam. Under the leadership of the then Chief Minister Narendra Modi, the JGY was

implemented in the same year in the State, by bifurcating the power supply for irrigation from the power supply for daily life (“*Jyotigram Yojana*”, 2020). The total electricity consumption of the District as a whole is 290 MU. Out of this, the maximum consumption has been by the agricultural sector (32.41%), followed by domestic (31.44%), commercial (12.65%), industrial (11.91%) and other sectors (11.37%). For lifting the groundwater through an electric pump, optimal utilization of electricity is done.

Villages having commercial banks and credit societies did not develop like other services. There are 84 branches of Scheduled Commercial Banks which is only 0.97 per cent out of total branches in the State. It can be observed from Table - 5.22 that, except Sankheda, other *talukas* did not experience a satisfactory increase in agricultural Credit Societies. Post Office facility is available to only between 17 to 30 per cent of the villages across *talukas* of the District.

Healthcare is important for a strong workforce. Healthcare is much needed for child survival and safe motherhood, and immunization etcetera. In the Chhota Udepur district there are total 67 allopathic medical care centers in the rural areas. Out of which, 12 are Community Health Centers, 50 are Primary Health Centers and 2 are other medical healthcare centers. The urban area of the District has one Hospital, one Urban Healthcare Centre and one other healthcare center. However, these numbers are inadequate to support the present population of the District and to provide proper healthcare services. There are 15 Ayurvedic and 5 Homeopathic institutions offering medical treatments. Only Kavant *taluka* has 50 per cent villages with medical facilities. Tribal villagers need to come to a nearby town for serious ailment and the cost for the food and lodging is unbearable for them. The cost of treatment usually brings them under debt.

Table - 5.22
Decadal Change in Amenities: Chhota Udepur District

<i>Taluka / District</i>	No of Inhabited Villages		Transport Communication			Banks			Agricultural Credit Societies		
	2001	2011	2001	2011	Change %	2001	2011	Change %	2001	2011	Change %
Chhota Udepur	144	144	93	137	30.5	3	21	12.5	20	5	-10.4
Jetpur Pavi	212	212	134	211	36.3	9	25	7.6	76	1	-35.4
Kavant	133	131	92	127	27.8	6	14	6.2	18	5	-9.7
Nasvadi	217	216	112	202	41.9	4	5	0.5	31	5	-12.0
Sankheda	185	185	119	180	33.0	9	18	4.8	127	27	-54.1
District	891	888	550	857	34.8	31	83	5.8	272	43	-25.7

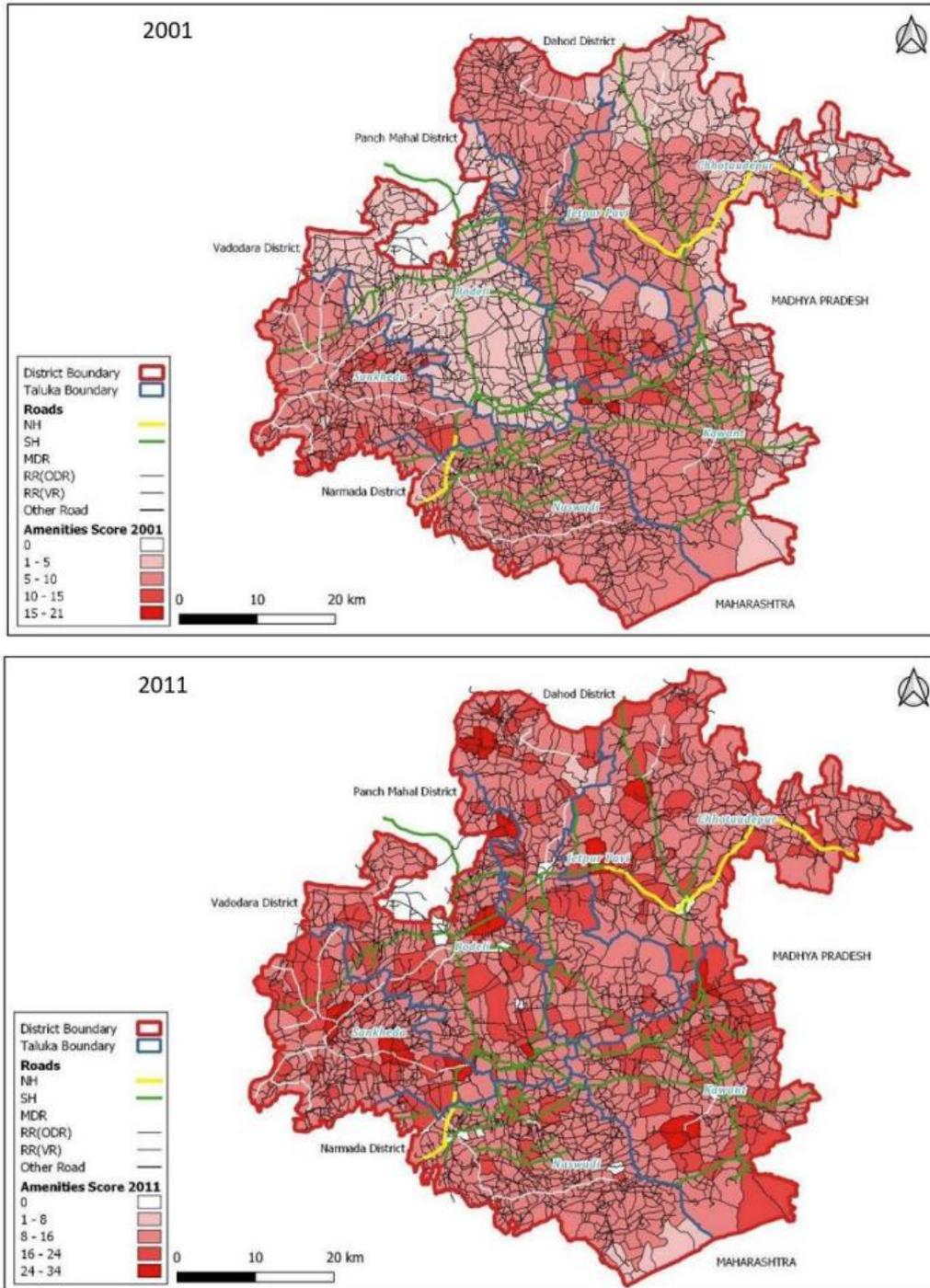
<i>Taluka / District</i>	Pucca Roads			Education			Medical		
	2001	2011	Change %	2001	2011	Change %	2001	2011	Change %
Chhota Udepur	102	100	-1.4	143	140	-2.1	110	51	-41.0
Jetpur Pavi	147	200	25.0	202	200	-1.0	200	62	-65.1
Kavant	100	126	21.0	130	130	1.5	87	69	-12.7
Nasvadi	93	166	33.9	191	207	7.8	197	75	-56.1
Sankheda	132	164	17.2	182	183	0.5	131	42	-48.1
Total	574	756	20.7	848	860	1.6	725	299	-47.7

<i>Taluka / District</i>	Drinking water			Post Office			Power supply		
	2001	2011	Change %	2001	2011	Change %	2001	2011	Change %
Chhota Udepur	141	144	2.1	29	28	-1.1	144	143	-0.7
Jetpur Pavi	197	212	7.1	55	49	-2.9	212	210	-0.9
Kavant	132	131	0.8	42	31	-7.9	133	131	0.0
Nasvadi	200	216	7.8	41	37	-1.8	201	211	5.1
Sankheda	184	185	0.5	64	55	-4.9	185	185	0.0
Total	854	888	4.2	231	200	-3.4	875	880	0.9

Spatial patterns of the overall amenity scores across the study area depicted through the village level maps for 2001 and 2011 (Map - 5.5) make two revelations. Firstly, there has been an increase in almost all types of amenities in the District during the last two census decades. Secondly, the availability and increase of the amenities are not spatially uniform. Perusal of the

maps reveals higher composite scores in the western and central *talukas* of Bodeli, Sankheda and Nasvadi, and lower composite scores in the eastern most parts of the two predominantly tribal *talukas* of Chhota Udepur and Kavant.

Map - 5.5
Village-Wise Amenity Score: Chhota Udepur District
(2001 and 2011)



5.25 Conclusion:

There are issues that have been persistent since the formation of the Gujarat state related to tribal farming. Farm operations and tribal farmers involved in it in the tribal *talukas* of Vadodara district and now Chhota Udepur district encounter many challenges. While discussing about cultivators, agricultural labourers or female workers and their percentage share in the total worker population, there have been many changes over the decades. Secondary sources of data make it clear that the growth rates of both non-tribal and tribal populations of the District have been by and large similar between 2001 and 2011. However, both the growth rates are declining. The predominantly non-tribal *taluka* of Sankheda displays a relatively more dispersed population along with low growth rate, most probable reason behind the scarcity of agricultural labourers for farm work. Number of households has increased threefold in the last five years but, the average family size of the households has reduced from 5.9 to 5.6 persons pointing towards structural change of society involving splitting up of joint families into nuclear families. The level of literacy in the eastern part of the District compared to its western part is lower. The eastern *talukas* of Kavant, Chhota Udepur and Jetpur Pavi show less literacy rate. Two positive indicators of development of the female segment of the ST population are sex ratio and literacy. Sex ratio in the Chhota Udepur district is much higher than most of the non-tribal districts. It is heartening to note that female literacy in the district is increasing faster than male literacy.

But there is inequality in the female work participation scenario. Female participation rate for both main workers and cultivators is declining as most of the other works like weeding, watering the plants, livestock rearing etcetera are not considered as productive work. There is a balance of work participation rate for male and female workforce in the District. Particularly percentage reduction of female main workers and female cultivators, is almost compensated for in the percentage increase of female agricultural labourers. Percentage increase in female marginal workers is much higher than male marginal workers but, there is continuous increase in the percentage share of tribal female marginal labourers. Perhaps decrease of income from agricultural operations and lack of alternative economic avenues in and around the village are the two important reasons. Consequentially, farmers are periodically moving out in search of economic avenues for sustenance along with their families.

Land and labour together are basic to farming. Economy supports the livelihood of people of any region, again land and labour together roll the ball of economy. Fragmented and marginal size of land holdings do not support generation of surplus income for the farmers. Again, periodic movement of the farmers deviously hamper farm attainment. Engagement and interest towards farming is thus deteriorating among the rural tribal youth. Without augmentation of the human development indicators for the tribal farmers, desirable productivity of the land is difficult to achieve.

Difficulties of getting water from the canal and well irrigation in the Rabi and summer season leads to more than 65 per cent of the cultivated land coming under rain fed farming. Poor soil quality with low Nitrogen content along with less uses of organic manure, make the soil more unproductive. Problem of animal infestation like wild boar and porcupine, destroys time, energy and peace of the workers.

Decadal population growth and change in the number and size of households are changing the social structure. Earlier farm labourers could be easily available from the individual household itself. But nowadays, even large landholders are facing challenges of arranging farm labourers. As a consequence of low literacy level especially among the female segment of the population in the District, knowledge and awareness for the government schemes could not be utilized optimally. And this situation is reflected in the trend of increasing numbers of tribal women engaged as marginal farm labourers rather than as cultivators. Though there is a balanced sex ratio all over the District, the advantages of involving female farm labourers for taking decisions pertaining to economic pursuits of the family are not fully realized. There is a need for a larger number of vocational institutions throughout the District to enhance skill and knowledge development for farm inputs.

Along with reduction of male cultivators and male main workers, from 1981 onwards there is an increase of marginal workers in the District. Female marginal workers' proportion to total female workers has always been more than 50 per cent in all *talukas*. It can be comprehended that female marginal worker's share was steady and constituted a larger portion of the female workers in the District. Increase in marginal labour could invite social and structural changes in the tribal

society as these marginal workers are mainly engaged in the unorganized sector as migrant labourers, who bring the exogenous influences from outside.

Marginalization of agricultural workforce, appropriately explain the condition of tribal farmers. Small, semi-medium and marginal land holders are basically labourers. Due to the meagre size of land, their farms are not producing enough for household consumption. But these labourers prefer to be considered as cultivators. As they utilize the farm production for household consumption only and do not sell or sell only non-food crops, the effective gross value addition to the economy remains insignificant. Duality of the occupation as farm labourers and migrant labourers is one of the characteristics of the tribal farmers for both males and females of the District. The proletarianization of a substantial portion of tribal farmers with the increasing number of wage labourers than cultivators, restricts the benefit of age old intellectual traditional wisdom.

To restrict the system of dual occupation and make them more interested in farming, especially the youth, more and more infrastructure development is most essential now. MGNREGA, SHGs and Udyam registration are some of the avenues which can support the young tribal population to do farming with added income. Considerable progress of the four amenities namely, education, drinking water, road transport and power supply has started providing a promising base for the future. There is an urgent need of increasing the number of PHCs and CHCs in almost all *talukas* on a regular basis in consonance with population growth.

Out of all the attributes discussed in the chapter and considering the status of current amenities available, a composite score has been prepared. From the composite scores of the villages, sample villages are selected. From the survey reports of the sample villages, primary information has been gathered and analyzed in the following chapters for hypothesis testing.

