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Changing Occupational Structure of Workers in KBK Districts of Odisha

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ABSTRACT

This paper examines the changing structure of occupation in the KBK districts of Odisha based on secondary sources data. The three districts under study of KBK region was selected on the basis of the nature of traditional backward, seasonal migratory and tribal dominated district of Odisha. The persistence of crop failure, low net irrigated area, lack of access to the basic utilities service and entitlements, starvation, malnutrition and migration usually a leading issues in these districts under study of backward KBK region of Odisha. Despite the fact that there is a remarkable change in the KBK region and state of Odisha that there is significant shift of workers from agriculture to non-agricultural sector from census 2001 to census 2011 in general, but particularly from agricultural workers, only the cultivators declined but agricultural labour increased in the KBK districts of Odisha over time. This increase in the agricultural labour has been adverse affect on livelihood pattern of the people in the KBK districts of Odisha, because this region usually found dry, drought and non-irrigated area. Most of the people in this region are very poor and they unable to sustain their livelihood because there is no employment opportunity of agricultural labour in the farm sector as well as non-farm sector. Some workers are migrating to other places like Andhra Pradesh, Channai, Gujarat etc during lean season in order to get employment opportunities and earn mere income to sustain their livelihood. Beside, the migrant's labour of this KBK region are also exploited and torture in the work place. Now, face the problems of reverse migration during the period of COVID-19. Hence, the greater public spending in MGNREGA and other rural livelihood programme could be important and suitable measures for absorption of surplus agricultural workers in the rural area, which would lead to increase earning and sustain their livelihood by the labour supplying households.

Keywords: Occupational Structure, Paradigm Shift of Workers, Work Participation Rate, KBK Region.

1. Introduction

The development path of rural economy is derived from the shifting of workers from agricultural to non-agricultural sectors. As we know that the workers in the developed countries are generally engaged in the secondary and tertiary sector. However, India is an agricultural country and its most of the people depend on the agricultural activities to sustain their livelihood pattern. But Indian agriculture is based on gamble in monsoon, so there is crops failure as due to draught and flood. Therefore, many workers are underemployed and the face the problem of poverty. The increase in income and employment opportunities is indispensable to achieve the high growth trajectory with equity and social justice in the state economy. But it is also essential for reducing the poverty and unemployment in rural economy. The gainful employment opportunity is an important condition for food security, economic security and sustainable livelihoods. The actual rate of expansion of labour force in the state usually depends on several factors that include growth of population, working age population, labour force participation rates, educational enrolment at higher levels and reduction in school drop-out rates.

2. Definition of Occupational Structure and KKB Districts

The occupational structure is a study of different working age groups of population under various economic activities, which occupies an important place in the economic and human geography. The occupational structure is indispensable to understand the distribution of workforce in various occupations and its participation in different economic activities. The study of occupational structure provides background knowledge for formulating future development plans. The social and economic development of any region depends on the number of economic activities. Population generally engaged in various occupations as classified below. The workers in economics activities can be classified into three major categories such as (i) primary activities. (agriculture, forestry, hunting, fishing, mining, quarrying etc.); (ii) secondary activities. (manufacturing, construction, power generation etc.); (iii) tertiary activities. (commerce, storage, transport, miscellaneous services etc.). According to Census of India 1981, the working population has been classified into three major groups' viz (i) Main worker; (ii) Marginal worker; (iii) Non- worker. Main workers are those who participated in any economically productive activity for not less than six months during the year preceding the data enumeration, but for marginal workers less than six months during the reference period. Since, there is a large variety of occupations; Census authorities have further classified the main workers into following four categories during 1981 viz (i) cultivation; (ii) agricultural labours; (iii) household industry (Manufacturing, processing, service and repairs); (iv) other workers. However, in the Census 1991, again there has been change in classification of workers. The main workers classified into nine industrial categories such as (i) cultivators; (ii) agricultural labors; (iii) livestock and forestry, fishing, hunting, plantation and allied activities; (iv) mining and quarrying; (v) manufacturing, processing and repairs(a. Household industry and b. other than household industry); (vi) construction; (vii) trade and commerce; (viii) transport, storage and communication; (ix) other services. In Census 2001, there has been again change in classification of workers. The

main workers classified into four categories such as (i) cultivators; (ii) agricultural labours; (iii) household industries; (iv) other services. For the purpose of simplification, the census 2001 classification of worker has been taken into consideration to analyze the shifting of the workers from agriculture(cultivator plus agricultural workers) to non-agriculture sector(household industries and other workers).

The undivided districts of Kalahandi, Balangir and Koraput are popularly known as KBK districts. Since 1992-93, which have been divided into eight districts (2+2+4) such as Kalahandi & Nuapada, *Balangir & Subarnapur*, Koraput, Malkangiri, Rayagada and Nabarangpur. As per this study out of eight districts, here three districts have been taken in to consideration such as *Nuapada, Balangir and Rayagada* (NBR) on the basis of scope for the nature of seasonal migration, ex-feudal and tribal dominated respectively in KBK region of Odisha State.

3. Review of Literature

There are many studies have been examined the changing structure of workers in the Indian economy as suggested by Desai (1971) irrespective the number of person engaged in variety of occupational activities, there could be occupational change if there is a change in their social relationship of the men engaged in the activities to earn their livelihood. The problems of poverty cannot be solved merely by programme for generating new or additional employment but it is necessary to improve the millions who are underemployed (Dantawala, 1973). The existence of unemployment/underemployment is mainly due to higher population growth and deficiency of effective demand for wage employees in case of those self-employed in agriculture or elsewhere in the economy by absence of opportunity for productive work. The changing structure of employment at the aggregate level for rural households in India and Indonesia was examined without considering the structure of village economy (Chadha, 1994). He empirically tested the “theory of trickledown effect” and it has been found that the evidence on changing structure of the employment for rural household: as a gradual shift from agriculture to non-agricultural activities observed through the NSS survey for periods- 1972-73 (27th round; October 1972- Sept, 1973); 1977-79(32nd round; July 1977- June 1979); 1983 (38th round; January – December, 1988). He also observed that agricultural employment elasticity with respect to output has been declining steadily over time. The increasing pace of mechanisation e.g the increasing use of threshers, hullers, tractors are likely to reduce the demand for labour and consequence adverse affect on agricultural wage rates. There is evidence of declining employment elasticity with respect to output for many sector of Indonesian agriculture during the past decades. So it may be predicted that future expansions in agricultural output would impose a further squeeze on the demand for labour. (Bhalla, 1987, pp-539-42). In the preceding decade of 1970s, when the level of poverty declined, real wages went up, and the share of the workforce engaged in agriculture at last started creeping down (Bhalla, 1997). Since wages in non-agricultural employment have been consistently above wages in agriculture, it was realized that a part of the significant decline in rural poverty was also related to the opening up of opportunities for non-farm work. In the 1990s, India taken as a whole, such opportunities collapsed over the time periods, the timing of the decline in the share of workforce engaged in rural non-farm

activities exactly matches with the timing of the rise in rural poverty. Real wage rates in agriculture even in the most recent period are still inversely related to poverty in most states and directly related to the availability of non-farm employment.

At the all India level, the secondary sector absorbed less worker compared to the primary and tertiary sector (Kumar and et al; 1995), and it is found that the agricultural sector show a decline in the rural areas where as change was positive in urban areas. The scarcity of agricultural labourers faced by the employers is due to availability of non-farm job opportunities and public works started by the government and also invest the labourers with bargaining capacity (Kajale, 1999). The non-farm employment is caused by the pull factors and the push factors (Sarap, 2003). In case of the former the labour force will be absorbed in the gainful activities and their meager income available growth of certain NFA, which is due to expansion of development expenditure by the State. As per NSSO 5th Round Report, 19.02 percent of rural workers in Orissa were engaged rural non-farm activities (RNFA) in comparison to that of 21.60 percent at all India level. In the dry village a relatively higher percentages of labour as well as marginal and small farmers are engaged in non-farm activities. They were engaged in a variety of activities inside as well as outside of the villages. However, the income earned from different non-farm activities excluding these services sector was very low. As such employment in this sector provided some relief to the households. Services sector made the major contribution to the total Non-farm employment and the role of the state was quite significant in generally these Non-farm incomes. The educational level has significant impact in the choice of non-agricultural employment especially in service and regular employment in rural Andhra Pradesh. There is significant increase in weekly wage rate of non-agricultural workers as educational level increases. But no significant increase in wage rates in case of casual labor (Reddy and Kumar; 2006).

In the first quinquennium of the 21st century, during the period between 2000 and 2005 show a sharp acceleration in workforce growth and observe a slowdown in the rate of growth of labour productivity across most sectors and in the economy as a whole and a slowdown in real wage growth in rural India (Sunderam, 2007). There is a noticeable shift from farm to non-farm employment has been taken place in the post-globalisation era (Roli Mishra, 2010). The author have been taken one important hypothesis that there is a visible shift from rural farm to rural non-farm employment in the post-reform phase (1993-94 to 2007-08). The main findings of this study are as follows: (i) There has been growth in rural non-farm employment in post-reform period especially during the phases of agrarian crisis; (ii) The rural males have gained more than their female counterparts during the growth of non-farm employment. The work participation in primary and secondary occupation witnessed decreasing trend among schedule caste. The high percentage of schedule caste population engaged in primary occupation due to high rate of female participation in rural areas (Tilekar; 2011). The distress push factors have been predominant in driving workers to non-farm employment in Utter Pradesh (Sharad Ranjan, 2011). On the basis of study of above literature it has been observed that the trend of the occupational structure is changing over time and they studies till the end of time 2000, but no study is found in the KBK district of Odisha, hence here an attempt has been made to study and examine the following objectives.

4. Objective of the Study

1. To study the current status of occupational structure in the KBK districts of Odisha in census 2011.
2. To examine the changing occupational structure in the KBK districts of Odisha over different time from Census 2001 to 2011.
3. To understand the workforce participation rate (WPR) in the districts under study of KBK districts of Odisha State.

5. Hypothesis

1. There is no significant change in the occupational structure in the state of Odisha.
2. There is no significant change in the occupational structure in the backward KBK districts of Odisha.

6. Database and Methodology

This study is based on secondary sources of data or information to identify status and analyses the changing occupational structure at the KBK districts, region and state level. The secondary data are collected from Census Office. Also various reports of organizations, books, journals, newspaper etc are used for analysis. Secondary data have been collected from different government publications such as Statistical Abstracts, Economic Surveys, Primary Census Abstract-2001 & 2011, District Census Handbook-2001 and District Statistical Handbook etc.

The main purpose of this study is to find out any change in the development of the rural economy in general and in particular to assess the magnitude of changes in occupational structure in the KBK Districts of Odisha even after the implementation of the NREGA scheme. In order to accomplish these tasks, here the methods of suitable advance econometrics tool and techniques like time series data and ANOVA been used to measure the change in occupational structure and its analysis.

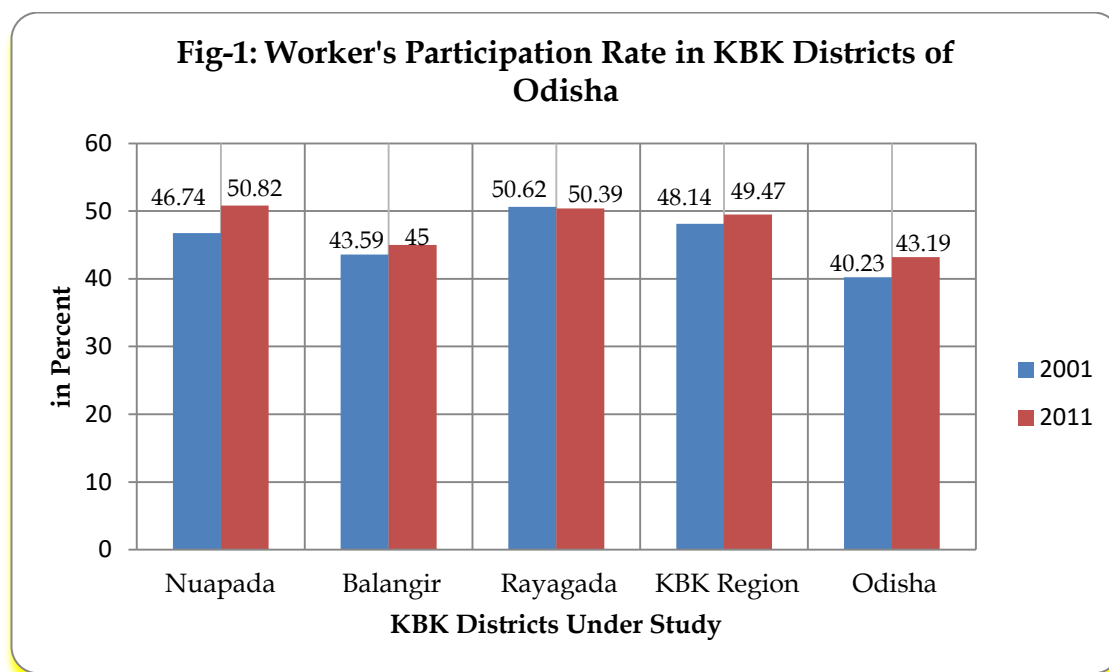
7. Results and Discussion

The result and discussion on the changing occupational structure has been made the comparative analysis of the State of Odisha with All India Level as well as among the different characteristics of the districts of KBK region in term of current status of employment, workforce participation rate(WPR), occupational distribution of workers and changing occupational structure.

7.1 Status of Workforce Participation Rate in KBK District of Odisha

As per the NSS data, the rate of unemployment in the state of Odisha has fallen lately from the 61st round (July 2004- June 2005) to the 68th round (July 2009- June 2010)(Economic survey, 2014). As per the Primary Census Abstract, 2011, it is observed that

the workforce participation rate(WPR) of Odisha is higher than that of All India level. The WPR in KBK region in 2011 is 48.06% which is higher than 41.79% at the state level So far as the KBK districts under study is concerned, one notices increase in all the districts of the region over time, but the highest WPR is found as 50.04% in the district of Nuapada, as compared to lowest as 43.07% in the ex-feudal district of Balangir in 2011. This is also found higher than that of the KBK region as well as the state (see fig-1 give below).



7.2 Changing Occupational Structure of Workers in Odisha

Here an attempt has been made to examine the current status of occupational distribution of workers (including the sum of both main and marginal) in terms of cultivators, agricultural labour, household's industries worker and other workers in the KBK Districts of Odisha as well as All India level. Also, a comparative study of the changing occupational structure in the state and national level as well as the KBK districts and region of Odisha can be examined from the Table-1 given below. It is observed that the percentage of cultivator and household industries worker have declined in both state as well as national level, but this decline in Odisha is marginally less than that of All India level. This decline is compensated by relatively increase in agricultural labour and other workers, but this increase in Odisha is found marginally less than that of All India level over the period of time from census 2001 to 2011(See Fig-2). Together considering cultivators and agricultural labor, it is observed that there is decline of agricultural workers in Odisha from 64.8% in 2001 to 61.81% in 2011. The same pattern is also noticed at All India level as decline from 58.2% in 2001 to 54.6% in 2011.

Table 1
Proportion of Occupational Distribution of Workers (Rural + Urban) to Total Workers in KBK Districts of Odisha in 2001 & 2011

Districts/ Region/State/ India	% of Cultivator		% Of Agricultural Labour		% of Household Industries		% of Other Workers	
	2001	2011	2001	2011	2001	2011	2001	2011
Kalahandi	29.63	19.28	50.33	58.08	2.87	2.45	17.17	20.18
Nuapada	34.1	31	46.28	49.06	2.94	2.83	16.68	17.11
Bolangir	31.03	23.11	40.06	45.3	4.3	3.98	24.61	27.61
Sonepur	32.69	25.82	44.57	48.63	6.81	6.54	15.92	19.01
Koraput	32.42	29.88	40.22	41.91	2.04	2.08	25.32	26.13
Malkanagiri	57.34	48.69	25.91	34.23	2.5	2.49	14.24	14.59
Rayagada	29.1	21.25	46.06	53.13	1.9	2.13	22.94	23.49
Nabarangapur	30.77	28.33	52.3	53.82	2.22	2.36	14.7	15.49
Total KBK	33	26.79	44.24	48.87	3.01	2.92	19.75	21.42
Odisha	29.75	23.4	35.02	38.42	4.91	4.46	30.32	33.72
All India	31.7	24.64	26.5	29.96	4.2	3.81	37.6	41.6

Source: Primary Census Abstract, 2001 & 2011

As per ANOVA Table-2 it is noticed that there is significant change between Census 2001 to Census 2011 in Odisha, but no significant variation among the distributions of workers at 5% level. The same pattern of observation is also found at national level. The same pattern of observation is also found in rural area. Further, the percentage of agricultural labour(43.82%) is found highest in rural Odisha followed by cultivators(26.68%), other workers(25.12%) and household industries(4.36%) workers. Thus, in agricultural sector together constituted 70.50% of rural labour(cultivator and agricultural labour) in Odisha, compared to 72.28% at All India level.

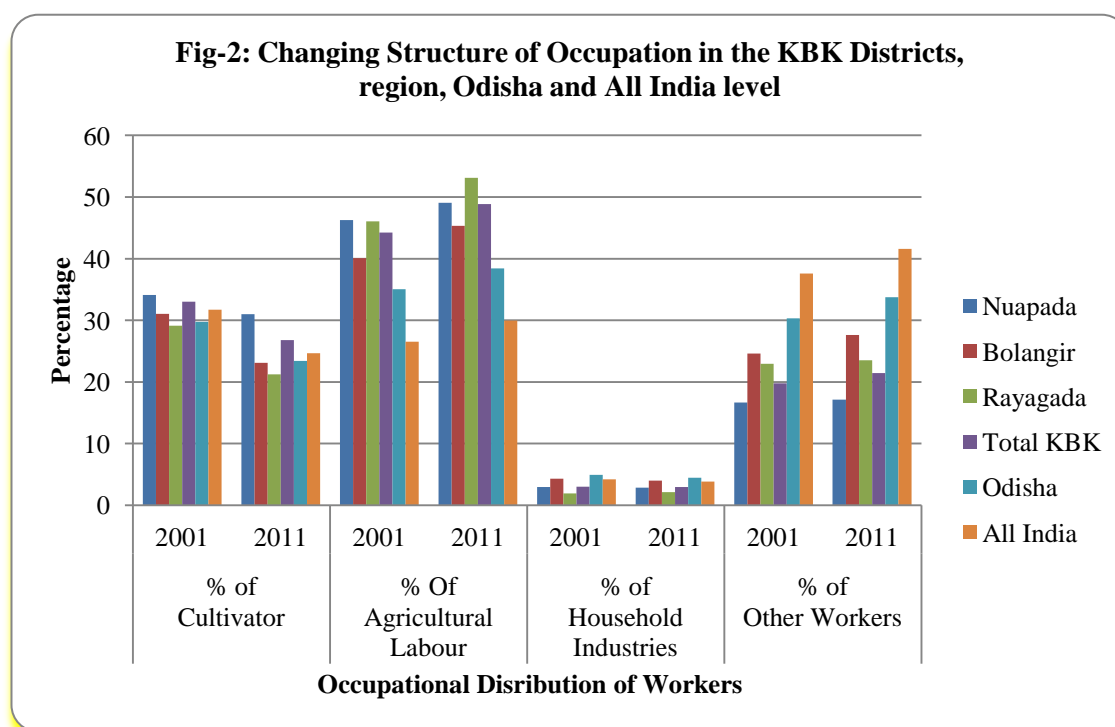
7.3 Changing Occupational Structure in the KBK Region of Odisha

The changing occupational structure of the workers in term of cultivators, agricultural labour, household industries workers and others workers in the KBK districts, region and the State of Odisha can be examined from Table-1 presented above. As per the Census data, it has been observed that on the one hand, the percentage share of cultivator to total worker has declined from 33.00% in 2001 to 26.79% in 2011 in the KBK region, in contrast to the decline from 29.75% to 23.40% in the state over time. On the other hand the share of agricultural worker increased from 44.24% to 48.87% and from 35.02% to 38.42% in the region and state respectively over the same period of time(See Fig-2). Together workers dependent on Agricultural sector (cultivators and agricultural workers) declined from 77.24% in 2001 to 75.66% in 2011 in the KBK region, while it declined from 64.7% to 61.8% in the state of Odisha over the same period of time. This implies that non-agricultural workers

increased over time. Hence there is shifting of workers from agricultural to non-agricultural sectors.

7.4 Changing Occupational Structure in the KBK Districts of Odisha

So far as the districts under study are concerned, the proportion of cultivators has declined in all the districts under study, but increase in agricultural labour over the same period of time. However, the proportion of cultivators is found highest as 30.00% in the western district of Nuapada as compared to lowest as 21.25% in the southern tribal dominated district of Rayagada. Similarly, the highest proportion of agricultural labour is found as 53.13% in the southern district of Rayagada in 2011 as compared to lowest as 45.30% in the ex-feudal district of Balangir(See Fig-2). The highest proportion of agricultural labour to total worker in the district of Rayagada is also higher than that of the region as well the state. As per ANOVA results, it is observed that there is no significance percentage variation in cultivation between difference districts, region-state and over time, but only significance difference is found in case of agricultural labour and others workers over time. However, the percentage various of household industries workers is found significance difference between KBK Region and Odisha State over time, not significance except between KBK districts at 5% level.



One can examine the percentage variation of agriculture and non-agriculture workers in the KBK districts, Region and Odisha over time from the Table-2 given below.

Table 2
ANOVA for Percentage Variation of Agricultural and Non-agricultural Workers in KBK Districts, Region of Odisha over time

Anova: Two-Factor Without Replication(Agricultural Sector Workers in KBK Districts)

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
District-wise	81.59816	7	11.65688	78.7049	4.02E-06	3.787044
Census-wise	1.991627	1	1.991627	13.44706	0.007996	5.591448
Error	1.036761	7	0.148109			
Total	84.62655	15				

Anova: Two-Factor Without Replication(Agricultural sector workers in KBK Region and Odisha)

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Region-State wise	43.26351	1	43.26351	368.8082	0.03312	161.4476
Census wise	1.282556	1	1.282556	10.9334	0.186964	161.4476
Error	0.117306	1	0.117306			
Total	44.66337	3				

Anova: Two-Factor Without Replication(Non- Agricultural workers in KBK Districts)

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
District-wise	81.65632	7	11.66519	79.01727	3.97E-06	3.787044
Census-wise	1.998689	1	1.998689	13.53865	0.007865	5.591448
Error	1.033398	7	0.147628			
Total	84.68841	15				

Anova: Two-Factor Without Replication(Non- agricultural workers in KBK region and Odisha)

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Region-State wise	43.26351	1	43.26351	368.8082	0.03312	161.4476
Census wise	1.282556	1	1.282556	10.9334	0.186964	161.4476
Error	0.117306	1	0.117306			
Total	44.66337	3				

From the Table-2 given above, it is observed that there is significance difference in the decline percentage of agricultural workers (cultivators plus agricultural labour) from census 2001 to 2011. Also, there is significance difference in the increase percentage of non-agricultural workers (household industries plus other workers) from census 2001 to 2011. This is a remarkable change in the KBK region and state of Odisha that there is significant shift of workers from agriculture to non-agricultural sector from census 2001 to census 2011 in general. But in particular within non-agricultural sector workers, it is found that only other

workers has been increased but household industries workers declined in the KBK districts of Odisha from census 2001 to 2011. Similarly, within the agricultural sector workers, only the cultivators declined but agricultural labour increased in the KBK districts of Odisha over time. This increase in the agricultural labour has been adverse affect on livelihood pattern of the people in the KBK districts of Odisha, because this region is dry, drought area and non-irrigated facilities. Most of the people in this region are very poor and they unable to sustain their livelihood because there is no employment opportunities of agricultural in the farm sector. As a result, large proportions of the rural poor and tribal in particular face severe food insecurity and depend on forests for their livelihood and subsistence. Some workers are migrating to other places like Andhra Pradesh, Chanaï, Gujarat etc during lean season in order to employment and earn mere income to sustain their livelihood. Beside, the migrants of this KBK region are also exploited and torture in the work place. Therefore, the state intervention should be required to provide an alternative employment opportunity in the drought region.

On the basis of above results and discussion it is noticed that the structure of occupation has been changing more or less in the KBK districts of Odisha. It has also been discussed that the growth of agricultural labour has been increased due to the unprecedented growth rate of population, poverty and unemployment in rural India. However, the unplanned spread of mechanisation threatens not only to accentuate the inequalities, but also to reduce employment opportunities. The combined effect of agrarian crisis in the backdrop of globalisation and greater use of mechanisation of agriculture has reduced demand for labour per unit of output in the rural areas. Further, there has been reduction in government expenditure and investment in the agricultural sector, thus reducing employment generation and resulting in a weak multiplier effect. Thus, the poverty and inequalities have emerged as the global challenges in the recent decades. There are two important appropriate strategies which can be adopted for poverty reduction and livelihood – the growth mediated poverty reduction that is through agrarian transformation and the social security. The former has failed in many states of India including Odisha due to agrarian distress and the trickle down has not trickled (Alhuwalia, 1978). In fact the government has initiated a large number of poverty alleviation programmes to increase the standard of living of the rural poor. The existence on mass poverty was acknowledged in the beginning of the 1970's, when “trickle down effect” of growth was lost in many countries. The Liwisian two-sector model of labour deployment and industrial development was accepted as real answer to solve the problem of unemployment and underemployment. The evidence of increasing poverty and income inequalities led to growth philosophy in every country. So that the growth-with-equity & justice” became a major policy issues in 1970's(Chadha, 1994). In this context, the process of the term “de-agrarianisation” is an important strategy for poverty reduction (Bryceson 1996). The later has succeeded in poverty reduction, especially in Kerala. The major factor behind the success in Kerala has been credited to her institutional efficiency (Kanan, 2010). According to R.S Rao(1984), in view of the limited capacity of agriculture to provide employment, what could be the course of action by agricultural labour? Should they migrate to towns in search of jobs to regions of low penetration of capital? Penetration of capital had given rise to a greater perception to migration in States like Punjab which has a relatively high income and high employment while in the case of Orissa, in spite of low income and low

employment, the perception or willingness to migrate is low. Thus, demographic factors also lead to some rural discontentment as the pressures of overpopulation either would make the labourers to migrate to other areas, which perhaps they are not willing to do, and if they stay back in the village, the employment poses a serious problem for their sustenance in the village. Therefore, apart from green revolution, the demographic pressure may also be a causative factor to agrarian movements.

8. Conclusion

Despite the fact that there is a remarkable change in the KBK region and state of Odisha that there is significant shift of workers from agriculture to non-agricultural sector from census 2001 to census 2011 in general. But in particular, from the non-agricultural workers, it is found that only other workers has been increased but household industries workers declined in the KBK districts of Odisha from census 2001 to 2011. Similarly, from the agricultural workers, only the cultivators declined but agricultural labour increased in the KBK districts of Odisha over time. This increase in the agricultural labour has been adverse affect on livelihood pattern of the people in the KBK districts of Odisha, because this region is dry, drought area and non-irrigated facilities. The occupational structures in the KBK districts are similar to that of the state of Odisha, though with high WPR in the districts under study. Most of the people in this region are very poor and they unable to sustain their livelihood because there is no employment opportunity of agricultural labour in the farm sector as well as non-farm sector. As a result, large proportions of the rural poor and tribal in particular face severe food insecurity and depend on forests for their livelihood and subsistence. Some workers are migrating to other places like Andhra Pradesh, Chanai, Gujarat etc during lean season in order to get employment opportunities and earn mere income to sustain their livelihood. Beside, the migrant's labour of this KBK region exploited and torture in the work place. Also, at present, they face the problems of reverse migration during the period of COVID-19. Therefore, the state intervention should be required to provide an alternative employment opportunity in the drought region. Hence, the greater public spending in MGNREGA and other rural livelihood programme could be important and suitable measures for absorption of surplus rural and agricultural workers in the rural area, which would lead to increase income earning and sustain their livelihood by the labour supplying households.

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